

Digital Printing System

Operating Instructions

SnapID

UPX-C100

Owner's Record

The model and serial numbers are located at the rear. Record these number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. _____

Serial No. _____

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

for the UP-DX110 Printer, DKC-C100X Digital Still Camera, and the UPA-AC05 AC Power Adapter

For the customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

If you have any questions about this product, you may call:

*Sony Customer Information Service Center
1-800-222-7669 or
<http://www.sony.com>*

for the UP-DX110 Printer

For the customers in the U.S.A.

Declaration of conformity	
Trade Name:	SONY
Model:	UP-DX110
Responsible Party:	Sony Electronics Inc.
Address:	16530 Via Esprillo, San Diego, CA 92127 U.S.A.
Telephone Number:	858-942-2230
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.	

For the customers in Canada

This Class B digital apparatus complies with Canadian ICES-003.

for the UPA-AC05 AC Power Adapter and the DKC-C100X Digital Still Camera

For the customers in the U.S.A. and Canada

This Class B digital apparatus complies with Part 15 of FCC Rules and the Canadian ICES-003.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

for the UP-DX110 and the UPA-AC05

WARNING

This unit has no power switch.

When installing this unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to socket-outlet which must be provided near the unit and easily accessible.

If a fault should occur during operation of the unit, operate the disconnect device to switch the power supply off, or disconnect the power cord.

WARNING on Power Connection

Use a proper power cord for your local power supply.

1. Use the approved Power Cord (2-core mains lead)/Appliance Connector/Plug that conforms to the safety regulations of each country if applicable.

2. Use the Power Cord (2-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/Appliance Connector/Plug, please consult a qualified service personnel.

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

For the customers in the USA and Canada

RECYCLING NICKEL METAL HYDRIDE BATTERIES

Nickel Metal Hydride batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit <http://www.rbrc.org/>.

Caution: Do not handle damaged or leaking Nickel Metal Hydride batteries.



For the customers in Taiwan only



廢電池請回收

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System Overview

The Sony UPX-C100 digital printing system is designed to allow you to take passport photos and similar ID pictures with a digital camera, and then print them at high image quality and resolution (403 dpi) in full color or black & white.

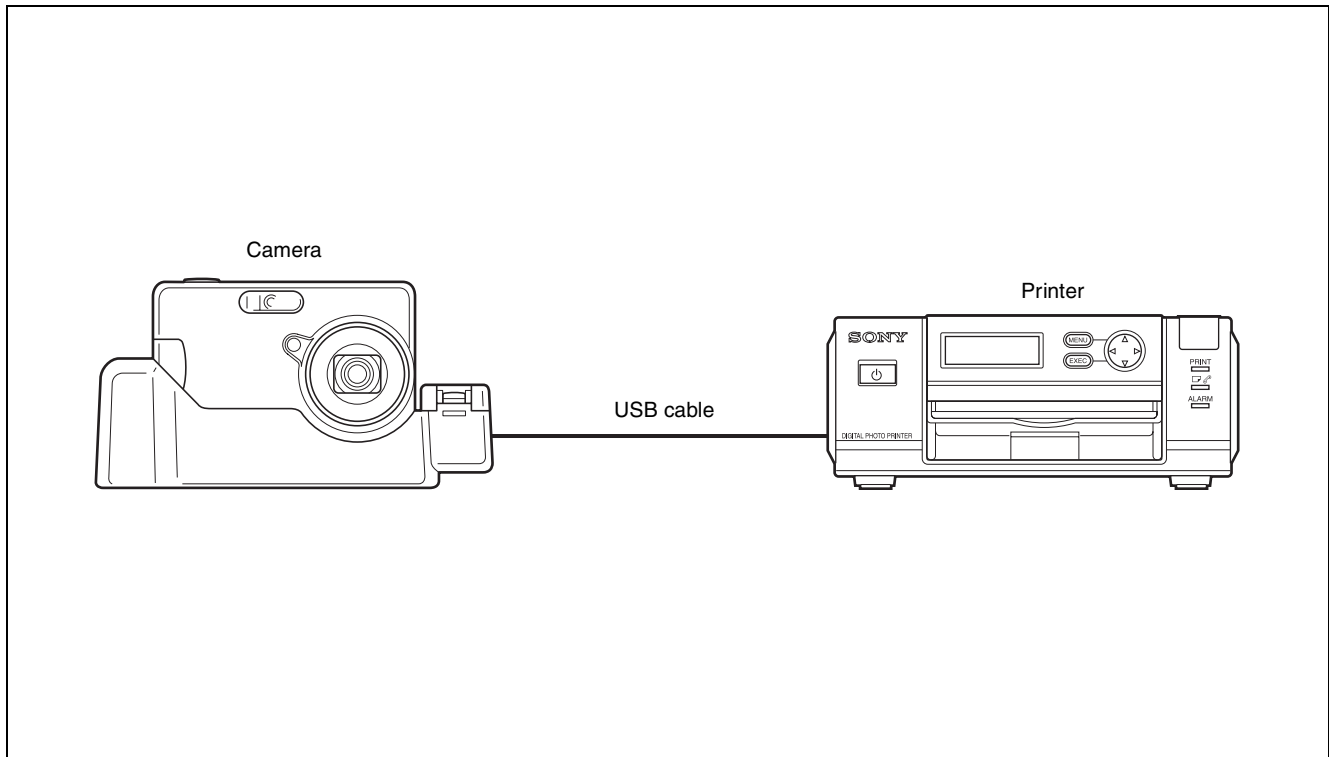
Three types of print paper are supported: UPC-X46 series, UPC-X45 series, and UPC-X34 series.

The optional UPA-DX100TR paper tray and 10UPC-X45 Series Self-laminating Color Printing Pack, however, may not be available in some countries and regions.

For detailed information, contact your nearest Sony dealer.

System Configuration

By connecting the camera to a printer by USB cable, you can send images to the printer for printing.



Note

Camera image data cannot be sent to any other peripheral device but the printer.

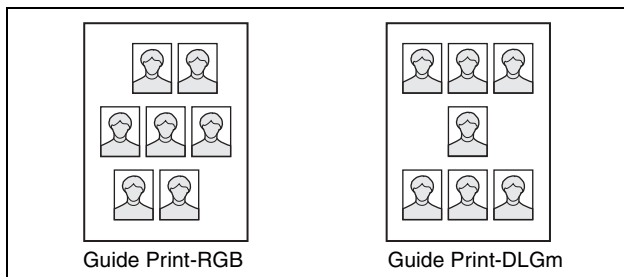
Print Layouts

Available prints sizes appear below each layout.

When using UPC-X46 series print paper

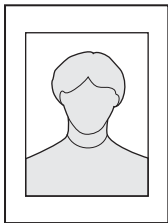
<p>1. 151 × 101.6 mm (6 × 4")</p>	<p>2. 120 × 90 mm (4-3/4 × 3-5/8") 3. 95 × 70 mm (3-3/4 × 2-7/8")</p>	<p>4. 80 × 60 mm (3-1/4 × 2-3/8") 5. 70 × 53 mm (2-7/8 × 2-1/8") 6. 70 × 50 mm (2-7/8 × 2")</p>	<p>7. 60 × 40 mm (2-3/8 × 1-5/8") 9. 50 × 48.5 mm (2 × 1-15/16")</p>
<p>8. 54 × 54 mm (2-1/4 × 2-1/4")</p>	<p>10. 47 × 37 mm (1-7/8 × 1-1/2") 12. 45 × 45 mm (1-13/16 × 1-13/16")</p>	<p>11. 45 × 35 mm (1-13/16 × 1-7/16") 13. 43 × 33 mm (1-3/4 × 1-5/16") 14. 38 × 32 mm (1-1/2 × 1-5/16")</p>	<p>15. 34 × 28 mm (1-3/8 × 1-1/8") 16. 23 × 23 mm (29/32 × 29/32")</p>
<p>17. 80 × 60 mm (3-1/4 × 2-3/8") D2 (2 pictures, 1 print each)</p>	<p>18. 60 × 40 mm (2-3/8 × 1-5/8") D2 (2 pictures, 2 prints each)</p>	<p>19. 47 × 37 mm (1-7/8 × 1-1/2") D3 (3 pictures, 2 prints each)</p>	<p>20. 45 × 35 mm (1-13/16 × 1-7/16") D2 (2 pictures, 4 prints each)</p>
<p>21. Special-1 (108 × 81 mm/47 × 37 mm, 4-3/8 × 3-1/4"/1-7/8 × 1-1/2")</p>	<p>22. Special-2 (47 × 37 mm/43 × 33 mm, 1-7/8 × 1-1/2"/1-3/4 × 1-5/16")</p>		

Guide print

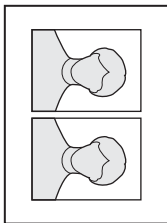


These guides are useful when adjusting the image quality of the printer.

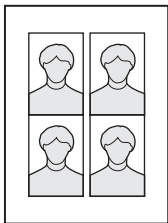
When using UPC-X45 series print paper



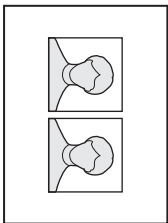
- 1. 120 × 97.5 mm
(4-3/4 × 3-7/8")
- 2. 120 × 90 mm
(4-3/4 × 3-5/8")
- 3. 95 × 70 mm
(3-3/4 × 2-7/8")



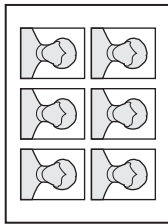
- 4. 80 × 60 mm
(3-1/4 × 2-3/8")
- 5. 70 × 53 mm
(2-7/8 × 2-1/8")
- 6. 70 × 50 mm
(2-7/8 × 2")



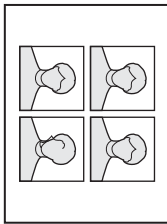
- 7. 60 × 40 mm
(2-3/8 × 1-5/8")
- 9. 50 × 48.5 mm
(2 × 1-15/16")



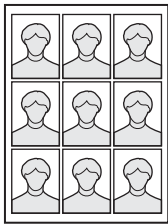
- 8. 54 × 54 mm
(2-1/4 × 2-1/4")



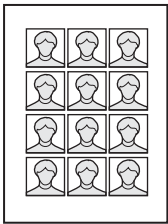
- 10. 47 × 37 mm
(1-7/8 × 1-1/2")
- 11. 45 × 35 mm
(1-13/16 × 1-7/16")
- 13. 43 × 33 mm
(1-3/4 × 1-5/16")
- 14. 38 × 32 mm
(1-1/2 × 1-5/16")



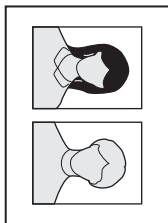
- 12. 45 × 45 mm
(1-13/16 × 1-13/16")



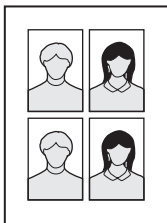
- 15. 34 × 28 mm
(1-3/8 × 1-1/8")



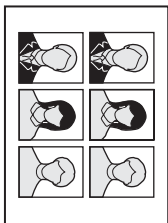
- 16. 23 × 23 mm
(29/32 × 29/32")



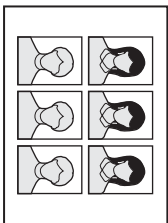
- 17. 80 × 60 mm
(3-1/4 × 2-3/8") D2
(2 pictures,
1 print each)



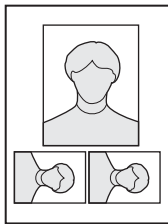
- 18. 60 × 40 mm
(2-3/8 × 1-5/8") D2
(2 pictures,
2 prints each)



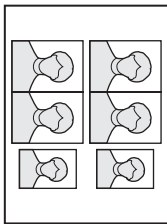
- 19. 47 × 37 mm
(1-7/8 × 1-1/2") D3
(3 pictures,
2 prints each)



- 20. 45 × 35 mm
(1-13/16 × 1-7/16") D2
(2 pictures,
3 prints each)

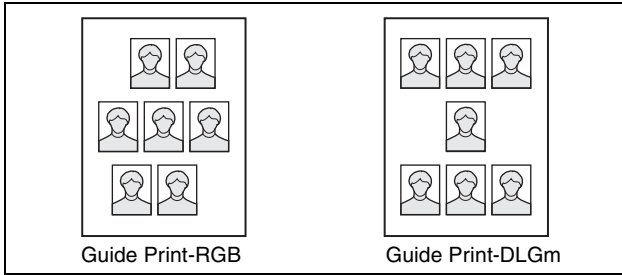


- 21. Special-1
(80 × 60 mm/47 × 37 mm,
3-1/4 × 2-3/8"/
1-7/8 × 1-1/2")



- 22. Special-2
(47 × 37 mm/43 × 33 mm,
1-7/8 × 1-1/2"/
1-3/4 × 1-5/16")

Guide print

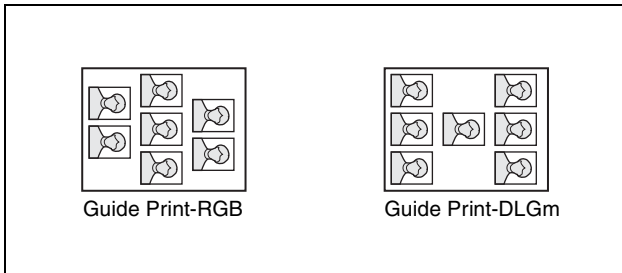


These guides are useful when adjusting the image quality of the printer.

When using UPC-X34 series print paper

<p>3. 95 × 70 mm (3-3/4 × 2-7/8")</p>	<p>7. 60 × 40 mm (2-3/8 × 1-5/8")</p>	<p>8. 54 × 54 mm (2-1/4 × 2-1/4")</p>	<p>11. 45 × 35 mm (1-13/16 × 1-7/16")</p>
<p>4. 80 × 60 mm (3-1/4 × 2-3/8")</p> <p>5. 70 × 53 mm (2-7/8 × 2-1/8")</p> <p>6. 70 × 50 mm (2-7/8 × 2")</p>	<p>10. 47 × 37 mm (1-7/8 × 1-1/2")</p> <p>12. 45 × 45 mm (1-13/16 × 1-13/16")</p>	<p>9. 50 × 48.5 mm (2 × 1-15/16")</p>	<p>13. 43 × 33 mm (1-3/4 × 1-5/16")</p> <p>14. 38 × 32 mm (1-1/2 × 1-5/16")</p>
<p>15. 34 × 28 mm (1-3/8 × 1-1/8")</p> <p>16. 23 × 23 mm (29/32 × 29/32")</p>	<p>20. 45 × 35 mm (1-13/16 × 1-7/16") D2 (2 pictures, 2 prints each)</p>	<p>21. Special-1 (70 × 53 mm/ 47 × 37 mm, 2-7/8 × 2-1/8"/ 1-7/8 × 1-1/2")</p>	<p>22. Special-2 (47 × 37 mm/ 43 × 33 mm, 1-7/8 × 1-1/2"/ 1-3/4 × 1-5/16")</p>

Guide print



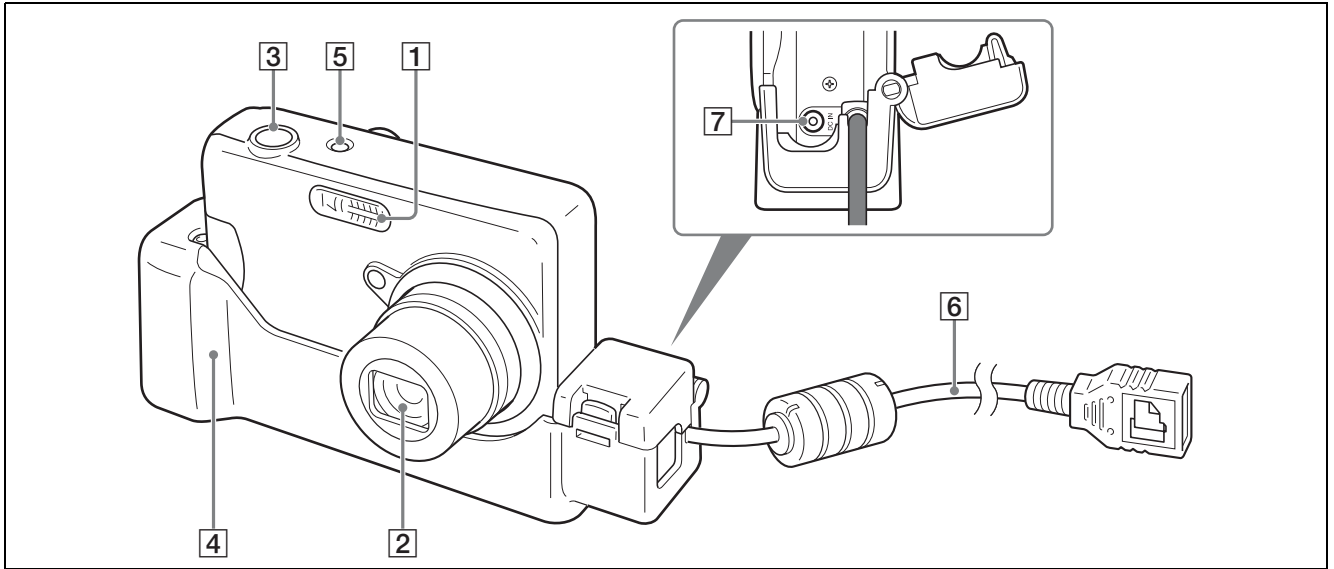
These guides are useful when adjusting the image quality of the printer.

Names and Functions of Parts

For details, see the pages in parentheses.

Camera

Front



1 Flash (38)

Fires according to the EXPOSURE & FLASH mode setting.

2 Lens (f=5.7 to 17.1 mm (1/4 to 11/16")), F-2.8 (W) to F-4.8 (T))

Autofocus lens with 3x optical zoom.

3 Release button (21)

Press this button to capture the image shown on the LCD and record it to the camera's built-in memory.

Pressing the button halfway activates the autofocus function, and pressing it all the way releases the shutter. The captured image is compressed and saved in JPEG format.

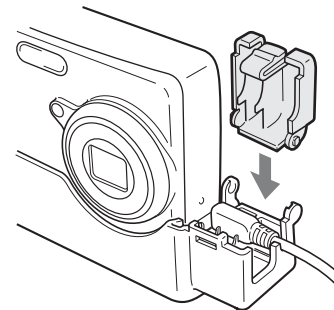
This button is active only when the mode dial is set to 1 – 5.

4 Camera grip

Allows you to hold the camera steadily while shooting pictures.

If the cap on the camera grip comes off

Insert the protruding portions of the cap into the grooves.



5 (On/Standby) button (21)

Switches between the camera's "on" and "standby" modes.

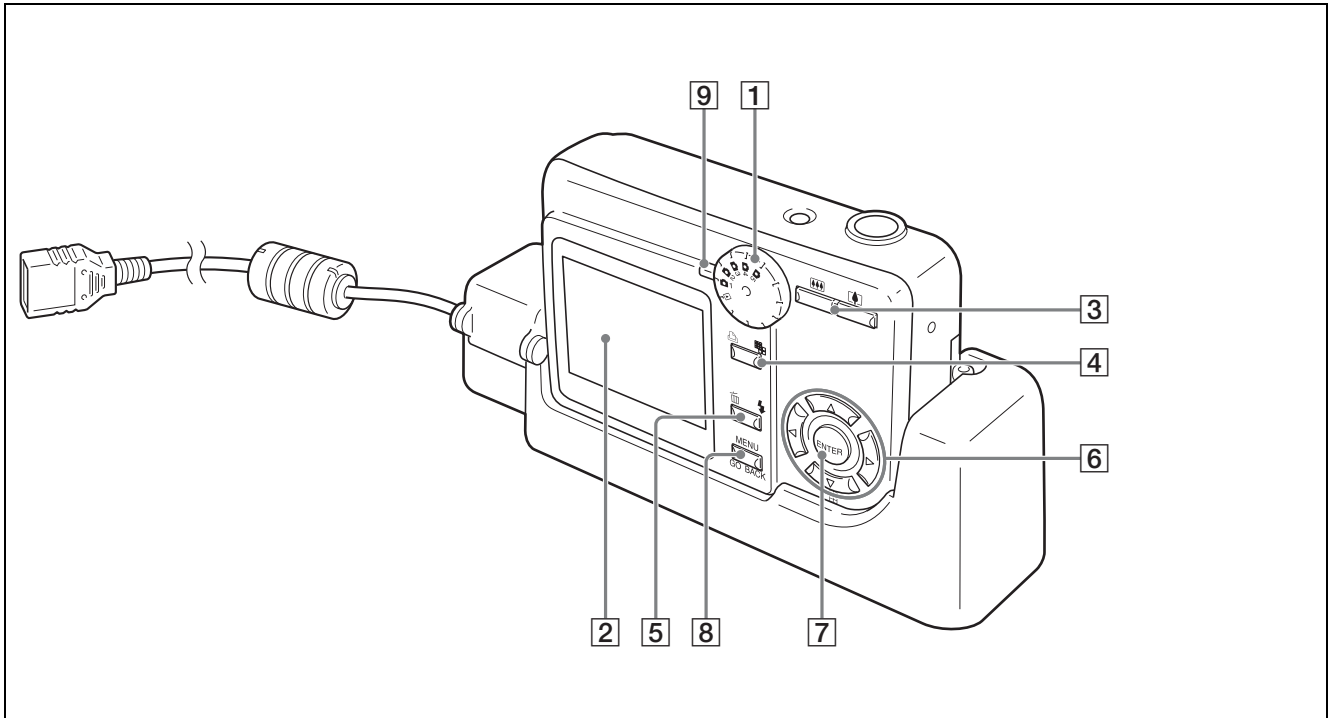
6 Printer connection cable

When printing, connects to a USB cable that is connected to the printer.

7 DC IN

Connects to the supplied AC power adaptor.

Rear



1 Mode dial (21, 25)

📷1 – 📷5 (Capture mode): Align one of these icons with the Standby lamp to shoot images.

▶ (Playback mode): Align this icon with the Standby lamp to view stored images.


2 LCD screen


When the mode dial is set to **📷1 – 📷5**, images captured by the lens are displayed here. When the mode dial is set to **▶**, playback images are displayed here.

3 Zoom lever (21, 25)


When the mode dial is set to 📷1 – 📷5

Adjusts the angle of view. In most forms of ID, the size of the face in the photo is regulated. By using the zoom function, you can adjust the size of the face while maintaining a fixed camera position. Up to 3× zoom is available.

 (T): Telephoto zoom.

 (W): Wide-angle zoom.

When the mode dial is set to ▶

: Zooms in on a playback image.

4 (Print/Resolution) button (23, 42)

Print

When the mode dial is set to **▶** or during auto-review display, press this button to print the image displayed on the LCD. Press the button once to make the layout preview screen appear, and press the button again to send the image data to the printer for printing.

Resolution

When the mode dial is set to **📷1 – 📷5**, press this button to change the resolution of the recorded image.

5 (Delete/Flash Mode) button (21, 26)

Delete

When the mode dial is set to **▶** or during auto-review display, press this button to delete the image displayed on the LCD.

Flash Mode

When the mode dial is set to **📷1 – 📷5**, press this button to change the EXPOSURE & FLASH mode.

6 ◀ ▲ ▼ ▶ control buttons

When the mode dial is set to 📷1 – 📷5

Use ◀ or ▶ to change the exposure compensation value (EV value) (changes may not be possible with some settings), or ▼/📷 to change the frame.

When the mode dial is set to 📷

Use ◀ or ▶ to select a playback image to display on the LCD, or ▼/📷 to change the frame.

When navigating menus

Use these buttons to select and set menu items.

7 ENTER button

Press this button to confirm a selection or operation.

8 MENU/GO BACK button (20, 26, 30)

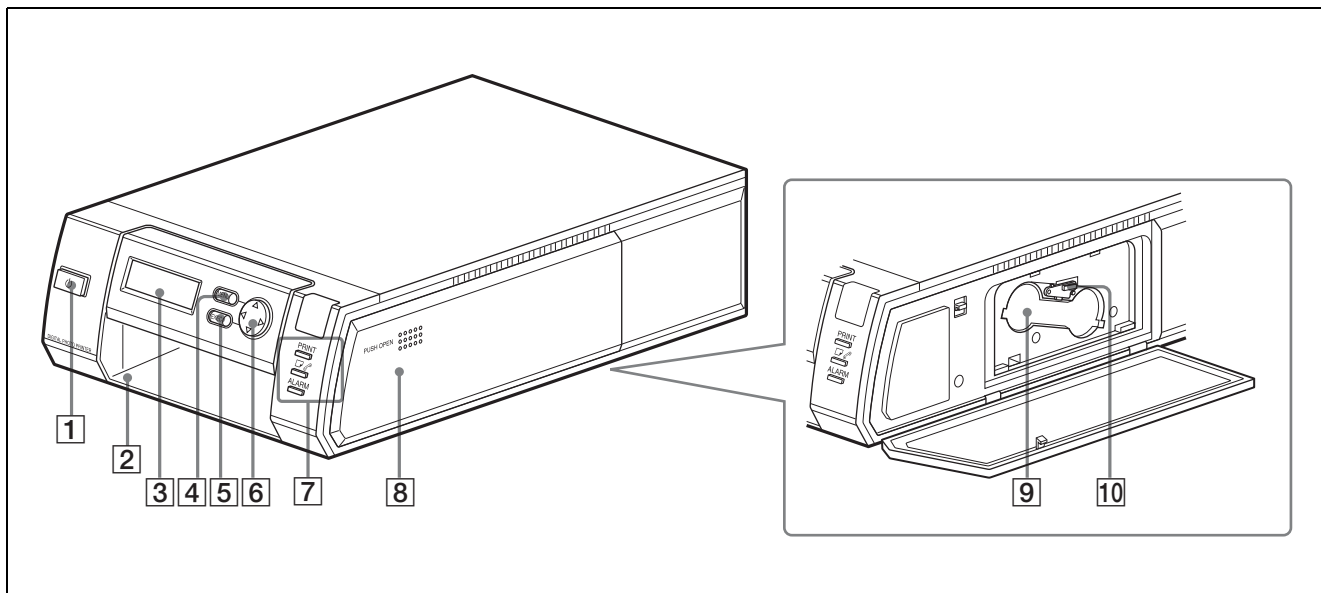
Press this button to display menus. You can also press this button to exit a menu or the layout preview screen.

9 Standby lamp (64)

Indicates the camera's status.

Printer

Front



1 (On/Standby) button/lamp (56)

When you press this button, the lamp lights and power is supplied to the printer. When you press the button again, the lamp turns off and the printer enters standby status.

2 Paper tray slot (19)

Insert the paper tray here.

3 Operation display

When the printer is on, information such as operation status and menu items display here.

4 MENU button (56)

Press this button to display menus or cancel changes made in menus.

5 EXEC (Execute) button (24, 56)


Press this button to execute menu items selected while navigating menus and after exchanging the ribbon cartridge.

6 Control button (24, 56)

When navigating menus, use this to select and set menu items.

7 Lamps

PRINT lamp: Lights when printing is in progress, and flashes when the printer is receiving image data.

 **lamp:** Lights when the paper or print cartridge runs out or the paper and print cartridge differ in size.

ALARM lamp: Lights when an error such as a paper jam occurs.

8 Print cartridge cover (17)

When inserting or removing print cartridges, press the area where PUSH OPEN is written to open the cover.

9 Print cartridge slot (17)

Insert the print cartridge here.

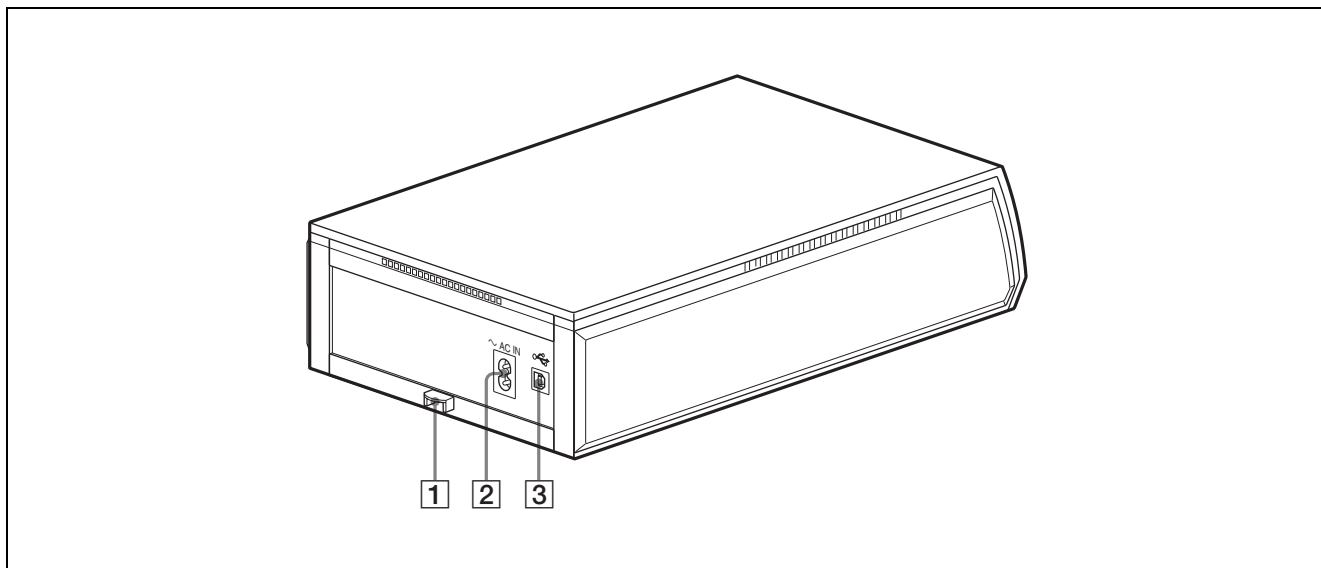
10 Cartridge release lever (18)

Raise this when removing a print cartridge.

Note

This lever is disabled while printing is in progress.

Rear



1 Paper jam cover (70)

When a paper jam occurs, remove this cover and remove the jammed paper.

2 ~AC IN connector (20)

Connect to a power outlet using the power cord.

3 USB connector

Connect to the printer connection cable on the camera using the USB cable.

Supplied Accessories

Confirming the Contents

Make sure that the following accessories are supplied with your system.

- Paper tray for the UPC-X46 series (1)
- Paper tray for the UPC-X34 series (1)
- Tray cover (1)
- Camera grip (1)
- Printer connection cable (1)
- UPA-AC05 AC power adaptor (1)
- USB cable (1)
- Size AA alkaline batteries (2)
- Cleaning cassette (1)
- CD-ROM (1)
- Warranty card (1)
- Before Using this Unit (1)
- Quick Reference Guide (1)

Preparations

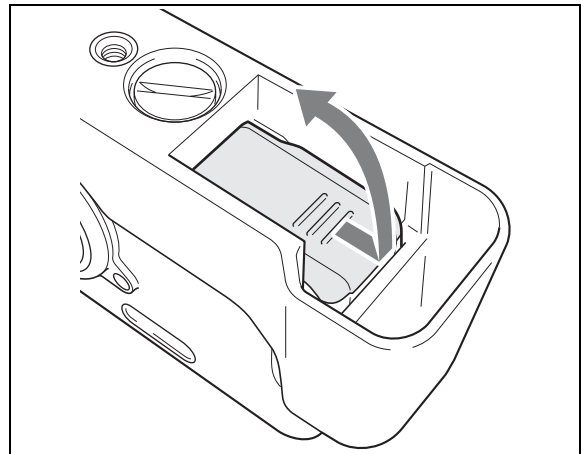
Preparing the Camera

Insert alkaline batteries or connect to an AC power source.

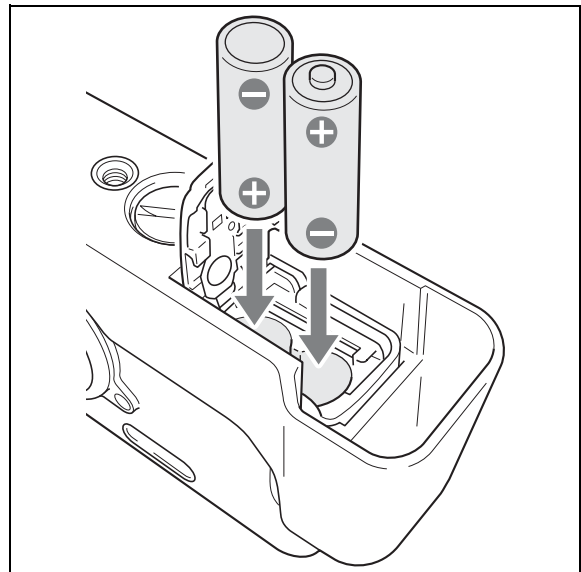
To insert the batteries

This system comes supplied with two size AA alkaline batteries. Perform the following steps to insert them.

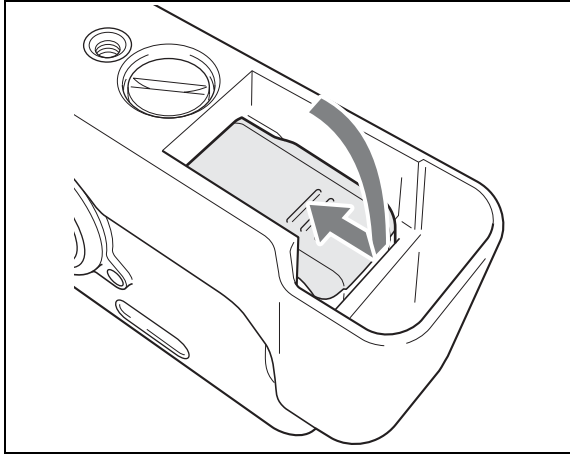
- 1** Slide the battery compartment cover at the bottom of the camera to open it.
There is no need to remove the camera grip.



- 2** Insert the two size AA batteries.



- 3** Close the cover and press down while sliding it to make sure it locks into place.

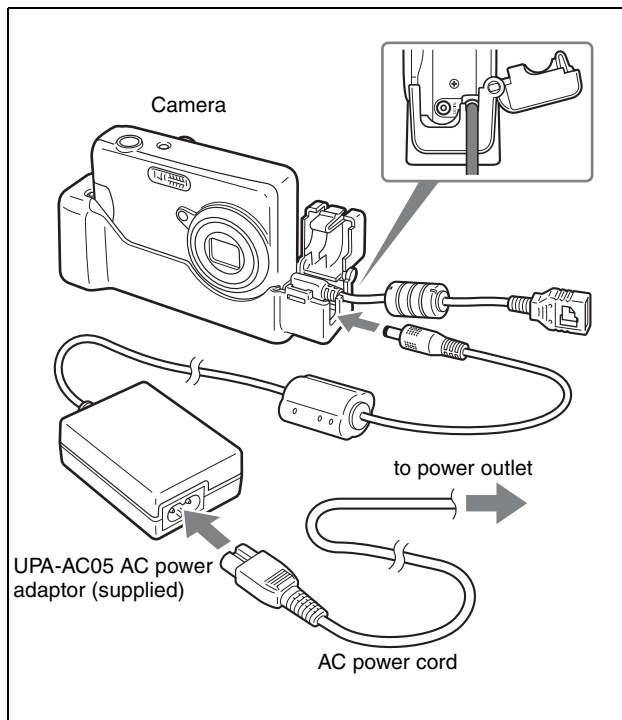


Note on replacing batteries

If the battery compartment cover is facing the ground when it is opened, the batteries will fall out. You can prevent this by making sure that the bottom of the camera is facing up when replacing the batteries.

To connect to an AC power source

Connect the supplied UPA-AC05 AC power adaptor to the DC IN jack on the camera, and connect the AC adaptor to a power outlet with the power cord.



Note

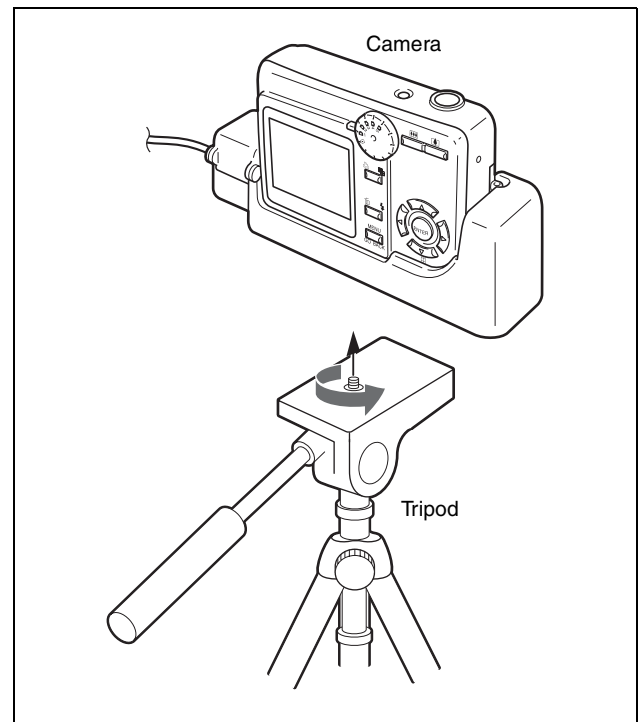
Make sure that the AC power adaptor is near the power outlet during use. If the camera malfunctions, immediately disconnect the AC power adaptor from the power outlet to cut off power supply.

To attach the tripod

You can attach the camera to a tripod using the tripod screw hole located on the underside of the camera grip.

Note

Tighten the screw for the tripod securely. If the screw is loose, the camera may fall off. However, using too much force when tightening may damage the screw hole. Make sure that the screw is inserted straight before tightening it.



Preparing the Printer

Before using the printer for the first time, perform the following steps to insert the print cartridge and paper tray. These preparations are not required at every use. Perform them only when necessary.

Print packs

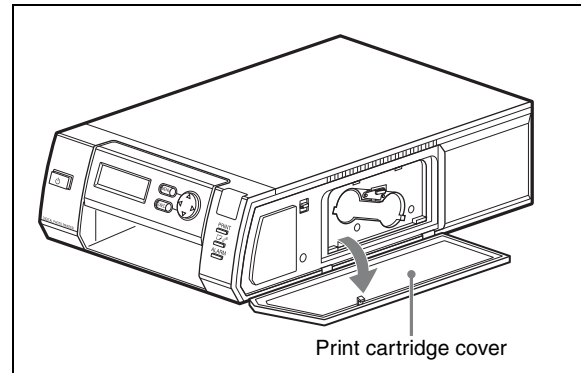
In order to print, a print pack designed for this printer (UPC-X46 series, UPC-X45 series, or UPC-X34 series) (not supplied) is required. A print pack is a set consisting of print paper and a print cartridge.

Notes

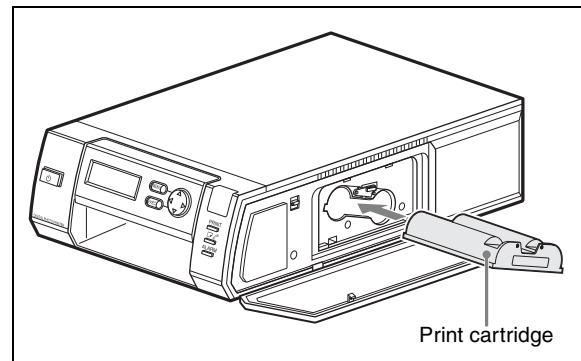
- Do not rewind the ink ribbon and use the rewound print cartridge for printing. Doing so may produce incorrect printing results or damage the printer.
- Only use print packs designed for this printer.
- Always use sets of print cartridges and print paper that match in size. Using a print cartridge together with print paper of a different size may produce incorrect printing results or cause paper jams and other problems.
- Do not print on used print paper. Printing an image twice on the same paper will not make the image darker and may damage the printer.
- Avoid touching the printing surface of the print paper and the ink ribbon of the print cartridge, and avoid storing print packs in locations subject to high temperatures and humidity, excessive dust, or direct sunlight. Fingerprints or dust on the printing surface or ink ribbon may lower the print quality.
- When removing partially used print cartridges and print paper from the printer for storage, store them in their original packaging.

To load the print cartridge

- 1 Press the upper portion of the print cartridge cover where PUSH OPEN is written to open it.




- 2 Insert the print cartridge into the cartridge slot, and push until it clicks into place.



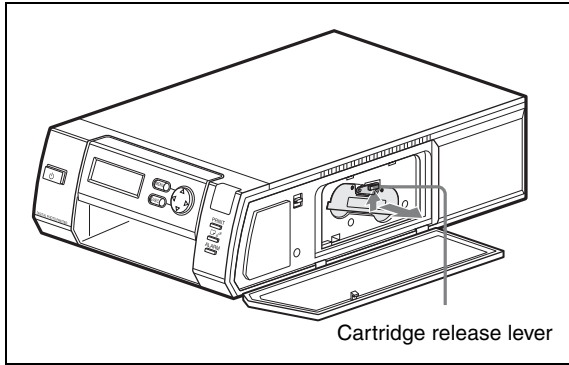
- 3 Close the print cartridge cover.

To replace the print cartridge

When the print cartridge runs out, the  lamp lights and an error message appears on the operation display. Perform the following steps to replace the print cartridge.

- 1 Press the upper portion of the print cartridge cover where PUSH OPEN is written to open it.

2 Raise the cartridge release lever.



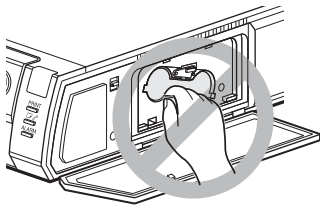
The cartridge is released, allowing you to pull it out.

3 Insert a new print cartridge, and close the cover.

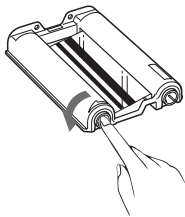
4 Press the EXEC button.


Notes

- Never put your hand into the cartridge slot as the inside can reach high temperatures.



- Do not rewind the ink ribbon and use the rewind print cartridge for printing. Doing so may produce incorrect printing results or damage the printer.
- If the print cartridge does not insert properly, remove it once before reinserting it. If the ink ribbon is too slack to be loaded, remove the slack by winding the ink ribbon in the direction of the arrow while pressing the spool. This is the only time the ink ribbon should be wound.



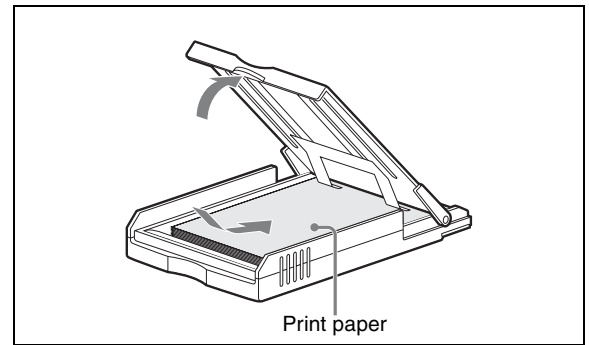
- When you turn on the printer with no print cartridge loaded, the  lamp lights.
- Do not touch the ink ribbon or place the print cartridge in a dusty location. Fingerprints or dust on the ink ribbon may lower the print quality.
- Do not remove or insert print cartridges while printing is in progress.

Notes on storage

- Avoid storage in locations subject to high temperatures and humidity, excessive dust, or direct sunlight.
- When removing a partially used print cartridge for storage, store it in its original packaging.

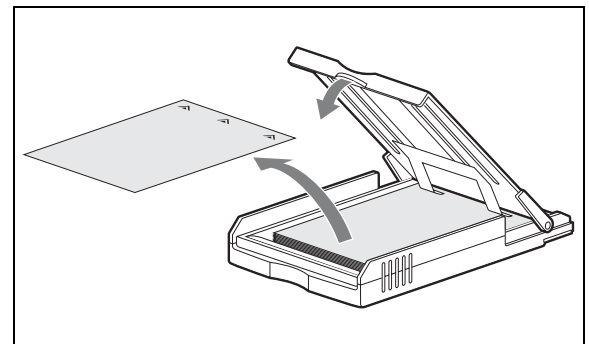
To load the print paper

1 Load the print paper into the paper tray.



Riffle through the print paper before loading it with the printing surface (the side without imprinting) facing up. Make sure that the arrow on the paper is pointing in the same direction as the arrow on the tray. You can load up to 25 sheets when using the UPC-X46 or UPC-X45 series and 30 sheets when using the UPC-X34 series.

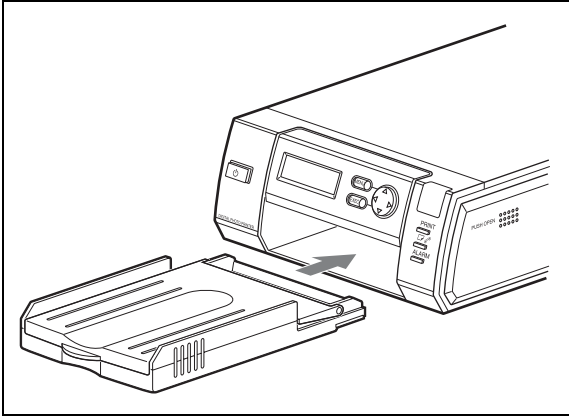
2 Remove the protective sheet on the print paper.



Note

Be sure to keep the protective sheet as it is used when cleaning the inside of the printer.


- 3** Insert the paper tray into the printer until it clicks into place.



Note

Do not touch the printing surface. Fingerprints or dust on the printing surface may lower the print quality.

Notes on loading the print paper

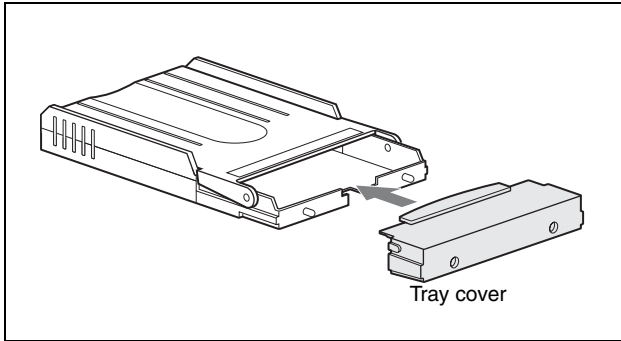
- Load UPC-X46 series print paper into the large paper tray and UPC-X34 series print paper into the small paper tray. The paper tray for UPC-X45 series print paper (UPA-DX100TR) is not supplied. Mismatch between the paper and tray sizes may result in a paper jam.
- Do not remove or insert the paper tray while printing is in progress.
- If the print paper does not feed automatically, the  lamp lights and a message displays. Pull out the paper tray, and check for a paper jam.
- When loading additional print paper into the tray, make sure that the total number of sheets does not exceed 25 for the UPC-X46 and UPC-X45 series or 30 for the UPC-X34 series. Do not load different types of paper in the tray together. Doing so may result in a paper jam.
- Do not write or print text on the print paper before printing. The printer may not be able to print on paper that has been written on. When writing on an image after printing, use an oil-based ink pen. Text from word processors cannot be printed on the print surface.
- Do not attach stickers or tape on the print paper before printing.
- Do not print on used print paper. Printing an image twice on the same paper will not make the image darker and may damage the printer.
- Do not fold or bend the print paper before printing. Doing so may damage the printer.
- When paper is ejected after printing, do not allow more than five sheets to accumulate in the paper tray. Doing so may result in a paper jam.

Notes on storage

- Avoid storage in locations subject to high temperatures and humidity, excessive dust, or direct sunlight.
- Do not store print paper sheets with their printing surfaces touching each other. Also, do not allow printing surfaces to remain in contact with plastic or rubber materials containing vinyl chloride or plasticizers for extended periods of time. Doing so may result in discoloration or bleaching.
- When removing unused print paper from the printer for storage, store it in its original packaging.

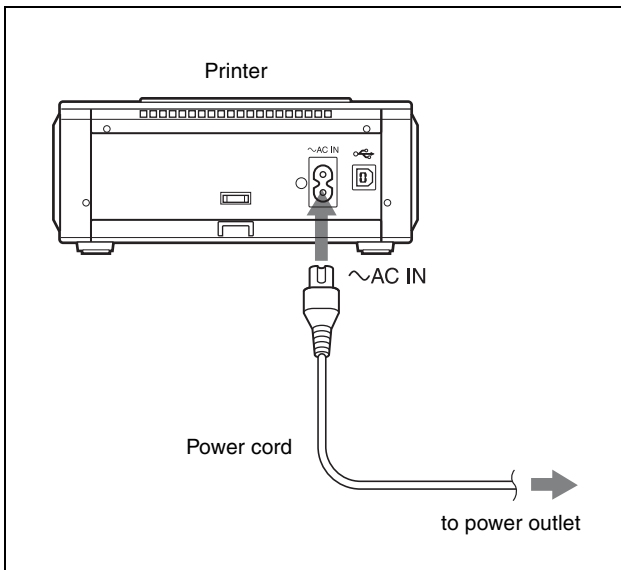
To attach the tray cover

Keep the supplied tray cover on the paper tray when not in use to protect the print paper inside from dust and other particles. You can attach a tray cover to any of the UPC-X46, UPC-X45, and UPC-X34 series' paper trays.



To connect the printer to a power outlet

Connect the printer to a power outlet using the power cord.



Operations (Shooting and Printing)

Image resolution settings

Before starting to shoot, we recommend that you select an optimal image resolution for your print size. When shooting ID pictures, set the image resolution to HIGH-ID or STD-ID.

For details on how to select an image resolution, see "Setting the Image Resolution (IMAGE RESOLUTION)" on page 42.

Shooting condition settings

The shooting condition settings on the camera are factory set to allow shooting without manual configuration, but you can change the shooting conditions as necessary using menus such as the one in Capture mode.

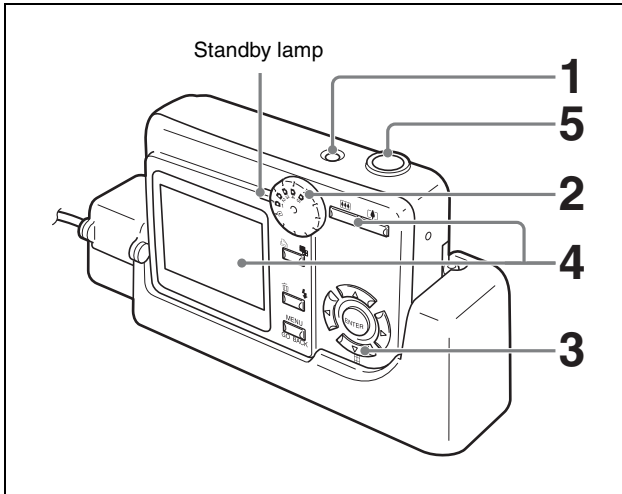
We recommend configuring the settings to match your usage environment.

For details on setting the shooting conditions, see "Setting the Shooting Conditions" on page 38.

Note

Images may be damaged and the camera may not operate properly if power is cut off while shooting or deleting pictures. Make sure that the AC adaptor does not disconnect and the battery compartment cover does not open during operation.

Taking a Picture



- 1 Press the button on the camera.
- 2 Set the mode dial to – .
- 3 When the image resolution is set to HIGH-ID or STD-ID, set the frame by pressing the control button.

For details on setting the frame, see “Setting the Frame (FRAME)” on page 45.

- 4 Point the camera at the subject, and adjust the frame while monitoring the camera LCD. Pressing the zoom lever allows you to adjust the frame by zooming.
 - (T): Telephoto zoom.
 - (W): Wide-angle zoom.

- 5 Press the release button halfway until the focus mark turns green, then press the button the rest of the way. A picture is taken, and it appears immediately on the LCD. This feature is known as the auto-review display. The picture is also simultaneously stored in the camera’s internal memory. During the transfer of data to memory, the standby lamp flashes orange. Once the data is stored and the built-in flash is charged for the next picture, the standby lamp turns green.

Pictures can be printed directly from the auto-review display without switching the mode dial setting.

For details, see “Printing the Last Picture Taken (From the Auto-Review Display)” on page 22.

If the focus mark turns red when you press the release button halfway, the picture is not in focus or the

automatic exposure control has failed. Slowly press the release button halfway again.

To take the next picture, press the release button or zoom lever to turn off the auto-review display, and then repeat steps 4 and 5.

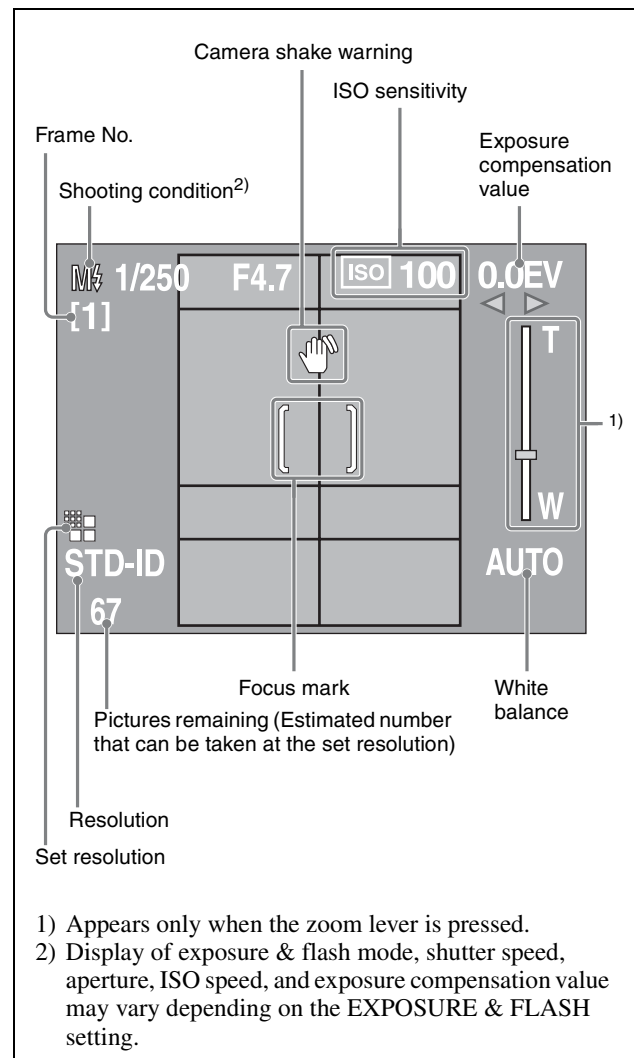
To delete the last picture taken

Perform the following steps to delete the last picture taken while it appears in the auto-review display.

- 1 Press the button. A screen asking you to confirm deletion appears.
- 2 Select OK by pressing the control button, and then press the ENTER button. The picture displayed on the LCD is deleted, and the camera returns to Capture mode.

The LCD in Capture mode

The following is an example of how the LCD may appear when the mode dial is set to – .



Autofocus function

Pressing the release button halfway activates the autofocus function. Once the subject is in focus, a green focus mark appears in the center of the LCD. When you press the button the rest of the way, the shutter releases and the picture is taken.

If the subject is out of focus when the button is pressed halfway, a red focus mark appears on the LCD. Lift your finger off the release button, and then slowly press the button halfway again. Even if the red focus mark appears, you can press the release button the rest of the way to take the picture.

Pressing the release button fully instead of pausing halfway will still take a picture, but the autofocus and exposure compensation functions will not activate. If **CAMERA SOUND** in the **SETUP** menu is set to **ANY ACTION** or **SHUTTER & PRINT**, an operating sound is heard when the release button is pressed halfway or pressed fully.

Note

If slowly pressing the release button halfway does not refocus the image, turn the camera off and then on again. In addition, the autofocus function may not work properly in the following situations:

- The subject lacks enough contrast.
- The subject includes an extremely bright object.
- The background is abnormally dark.
- The subject is positioned within 80 cm of the camera.

Exposure compensation function

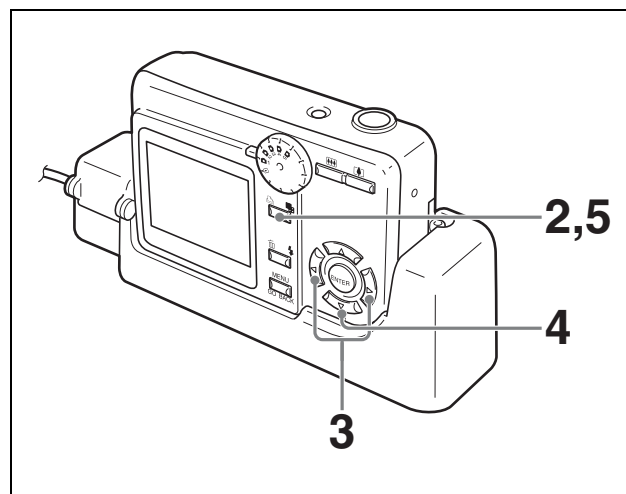
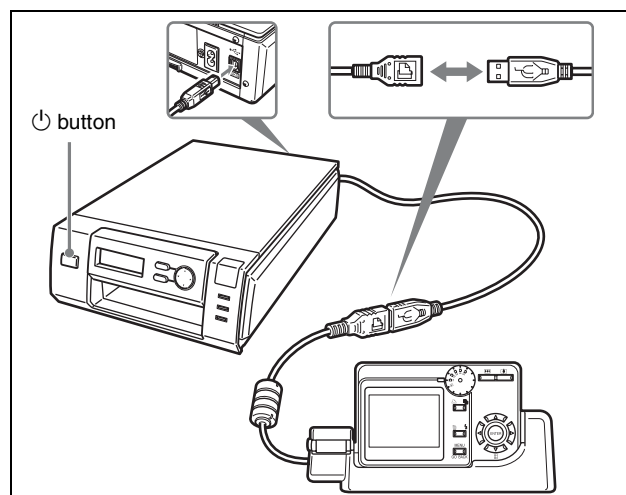
When the mode dial is set to **1** – **5** and the **◀▶** mark appears under the exposure compensation value (EV) at the top right of the LCD, you can easily adjust the exposure compensation by pressing the **◀** or **▶** control button.

Adjusting the exposure compensation may not have any effect for some **EXPOSURE & FLASH** settings.

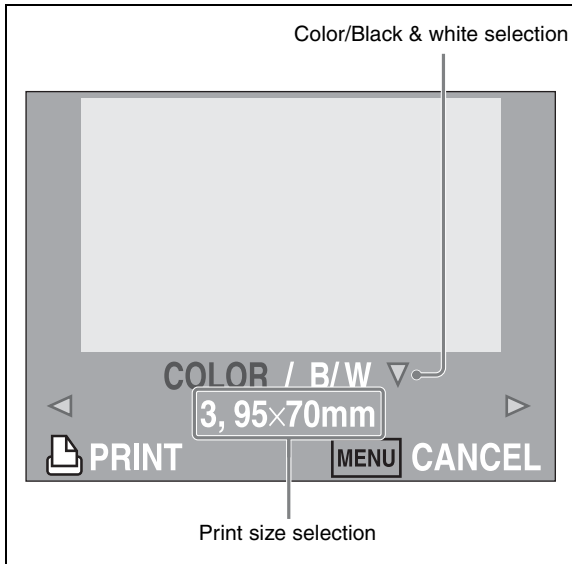
For details, see “Setting the Shooting Conditions” on page 38.

Printing the Last Picture Taken (From the Auto-Review Display)

- 1 Connect the camera to the printer and press the **⏻** button on the printer.



- 2 Press the button.
The layout preview screen appears.



If you press the button immediately after connecting the camera to the printer or turning the power on, the message “CHECK PRINTER” or “CHECK CONNECTION” may appear on the camera’s LCD.

When this happens, press the MENU/GO BACK button to clear the display, and then press the button again.

- 3 Select the print size using the ◀ and ▶ buttons.
Press the ◀ or ▶ button repeatedly until the desired size appears.

For details on the selected print size and picture dimensions, see “Setting the Frame (FRAME)” on page 45.

- 4 Select whether to print in color or black & white by pressing the ▼ button.

COLOR: Prints the picture in color.

B/W: Prints the picture in black & white.

- 5 Press the button again.
The image data is sent from the camera to the printer.

Note

Once the data transfer begins, it cannot be canceled.

When printing begins, “Printing in progress!” appears on the camera’s LCD. Close this message by pressing the MENU/GO BACK button or a control button.

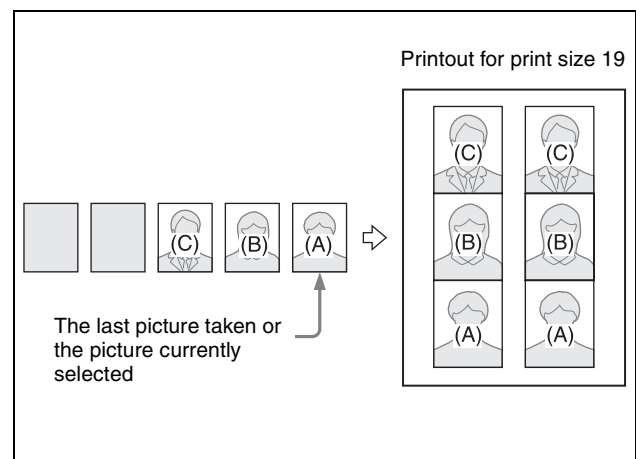
When the mode dial is set to 1 – 5, the LCD returns to the auto-review display. Once printing ends, you can print the same picture again at a different size, color, etc. You can also take another picture during printing. To take the next picture, press the release button halfway or press the zoom lever to turn off the auto-review display.

When the mode dial is set to , the LCD returns to the playback image.

To print multiple pictures on a single sheet of paper

By selecting print layout 17, 18, 19, or 20, you can print two or three different pictures on a single sheet of paper. Two pictures are printed with print layout 17, 18, or 20, and three pictures are printed with print layout 19. When the UPC-X34 series is used, only print layout 20 can be selected.

In Capture mode, the last two captured pictures (or the last three pictures, with print layout 19) are printed. In Playback mode, the currently selected picture and the previous picture (or the previous two pictures, with print layout 19) are printed.



To adjust the print quality

On the printer, you can independently adjust the print quality for color pictures and black & white pictures and store the adjusted values. Once these values are stored, the printer automatically selects the appropriate adjusted value for color prints and black & white prints, respectively.

For details on adjusting the print quality, see “Adjusting the Picture Quality (COLOR ADJUST)” on page 56.

To adjust black & white print quality

When you print a picture in black & white by selecting B/W, the picture is printed by overlaying yellow, magenta, and cyan, and therefore may not be perfectly achromatic. To adjust the black tone, you can use the print quality adjustment function on the printer.

Printing a Picture Stored in the Camera's Built-In Memory


When a picture is taken, its data is stored in the camera's built-in memory. To print stored pictures, view them in Playback mode and select the picture you wish to print. Then perform the same steps as when printing a picture from the auto-review display (on page 22).

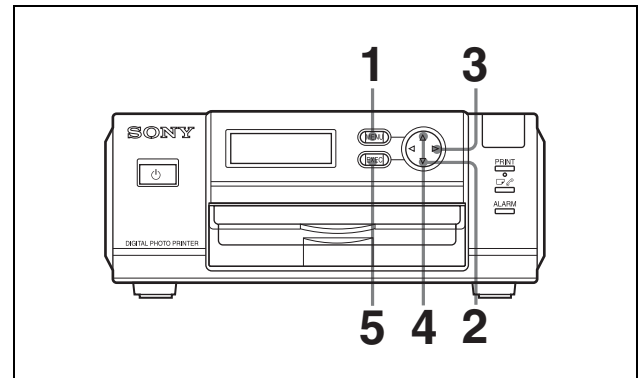
For details on viewing pictures stored in memory, see "Viewing a Picture on the LCD" on page 25.

Reprinting a Picture Stored in the Printer's Memory (COPY PRINT)

The data for the last picture that was printed is stored in the printer's memory. You can reprint this picture.

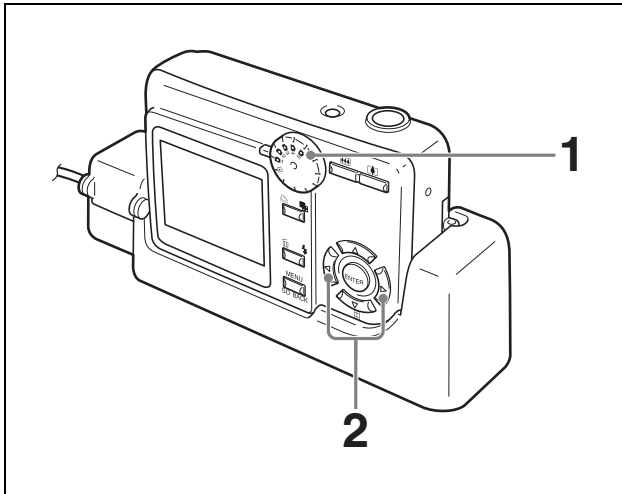
Note

If you press the  button on the printer and set it to standby mode (so the lamp goes out), the data stored in the printer's memory is deleted, and you cannot reprint the picture.



- 1 Press the MENU button.
- 2 Press ▼ on the control button to display "COPY PRINT [>>]."
- 3 Press ► on the control button.
"COPY PRINT: 1 [1 – 9 PRINT: EXEC]" appears.
- 4 Set the number of sheets to be printed by press ▲ or ▼ on the control button.
A value from 1 to 9 can be set.
- 5 Press the EXEC button.
The number of pictures set in step 4 is printed.
When printing completes, the READY screen reappears.

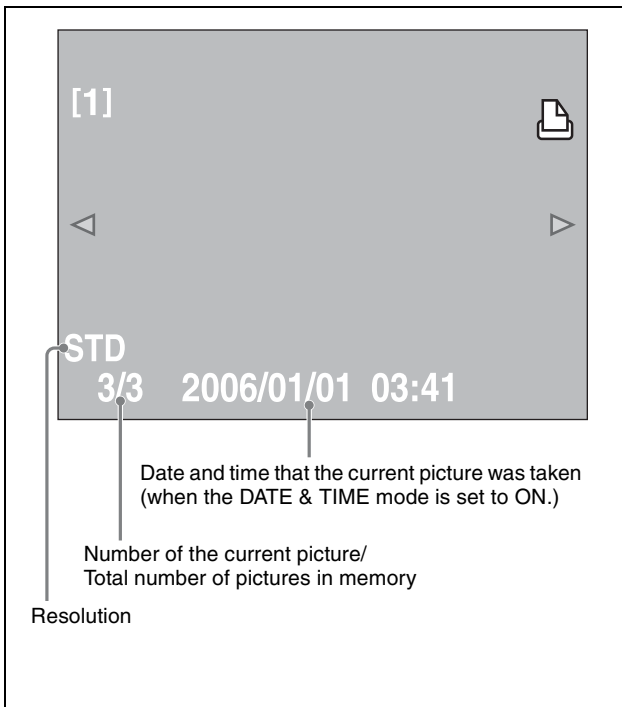
Viewing a Picture on the LCD



- 1** Set the mode dial to .
A picture stored in the camera's memory appears on the LCD.
- 2** Select a picture to view by pressing the or control button.

The LCD in Playback mode

The following is an example of how the LCD may appear when the mode dial is set to .



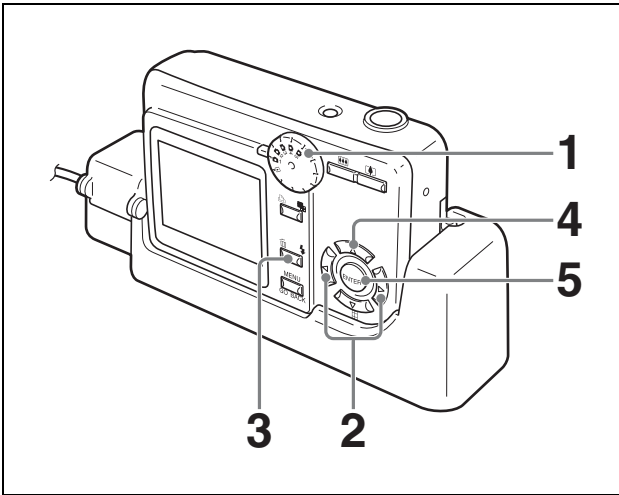
To magnify a playback image



By pressing the zoom lever toward , the displayed image can be magnified from 1.5 to 6 times larger. Each press of the zoom lever toward raises the zoom factor by 0.5, and each press toward lowers the zoom factor by 0.5. When the picture is magnified, you can use the control buttons (,) to move and adjust the area that appears on the LCD.

To return to the original display, press the ENTER button or the / button.

Deleting a Picture

To delete individual pictures in Playback mode

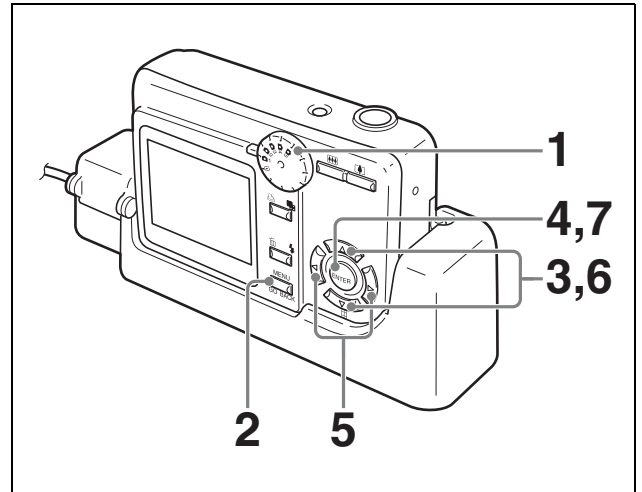




- 1 Set the mode dial to .
- 2 Select a picture to delete by pressing the ◀ or ▶ control button.
- 3 Press the  button.
The DELETE screen appears.
- 4 Select OK by pressing the ▼ control button.
- 5 Press the ENTER button.
The selected picture is deleted from the memory.

To continue deleting pictures

Repeat steps 2 to 5 above.

To delete individual pictures from the MENU screen

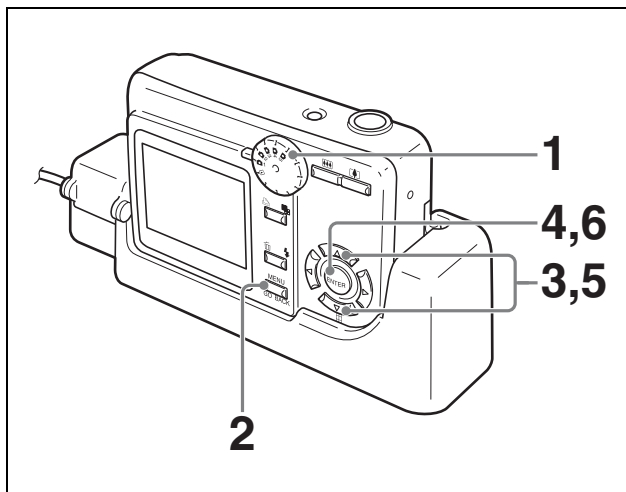









- 1 Set the mode dial to .
- 2 Press the MENU/GO BACK button.
The MENU screen appears.
- 3 Select DELETE by pressing the ▲ or ▼ control button.
- 4 Press the ENTER button.
The DELETE screen appears.
- 5 Select a picture to delete by pressing the ◀ or ▶ control button.
- 6 Select THIS IMAGE by pressing the ▲ or ▼ control button.
- 7 Press the ENTER button.
The selected picture is deleted from the memory.

To continue deleting pictures

Repeat steps 5 to 7 above.

To delete all pictures from the MENU screen



- 1 Set the mode dial to .
- 2 Press the MENU/GO BACK button.
The MENU screen appears.
- 3 Select  DELETED by pressing the  or  control button.
- 4 Press the ENTER button.
The DELETED screen appears.
- 5 Select ALL IMAGES by pressing the  or  control button.
- 6 Press the ENTER button.
A confirmation screen appears.
- 7 Select OK by pressing the  control button.

All pictures, except those that are protected, are deleted from the memory.

To cancel picture deletion

Select CANCEL on the DELETED screen, and then press the ENTER button. The MENU screen for Playback mode reappears.

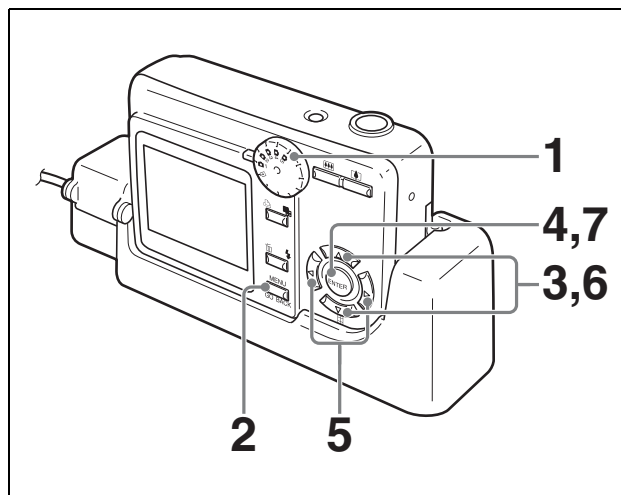
To exit picture deletion









Press the MENU/GO BACK button.


Protecting a Picture (PROTECT)


To avoid deleting a picture accidentally, you can use the picture protection function.

To protect individual pictures



- 1 Set the mode dial to .
- 2 Press the MENU/GO BACK button.
The MENU screen appears.
- 3 Select  PROTECT by pressing the  or  control button.
- 4 Press the ENTER button.
The PROTECT screen appears.
- 5 Select a picture to protect by pressing the  or  control button.
- 6 Select THIS IMAGE ON by pressing the  or  control button.
- 7 Press the ENTER button.




The  mark appears at the top right of the LCD.

Pictures that have already been protected display the  mark, and the THIS IMAGE OFF button appears on the PROTECT screen.

To protect additional pictures

Repeat steps 5 and 6 above.

To protect all pictures

- 1 Set the mode dial to .
- 2 Press the MENU/GO BACK button.
The MENU screen appears.
- 3 Select  PROTECT by pressing the ▲ or ▼ control button.
- 4 Press the ENTER button.
The PROTECT screen appears.
- 5 Select ALL ON by pressing the ▲ or ▼ control button.
- 6 Press the ENTER button.
The  mark appears and all pictures are protected.

To return to the MENU screen

Select CANCEL on the PROTECT screen, and then press the ENTER button.

To exit protection settings

Press the MENU/GO BACK button.

To release picture protection

If you wish to delete a protected picture, you must first release its protection setting.


To release individual protected pictures

- 1 Display the PROTECT screen, and press the ◀ or ▶ control button to select a picture to release.
- 2 Select THIS IMAGE OFF by pressing the ▲ or ▼ control button, and then press the ENTER button.

To release all protected pictures

Display the PROTECT screen, select ALL OFF by pressing the ▲ or ▼ control button, and then press the ENTER button.


The protection is released.

The  mark at the top right of the LCD disappears, and the THIS IMAGE ON button appears.


For details on displaying the PROTECT screen, see “To protect individual pictures” on page 27 and “To protect all pictures” on page 28.

Turning Off the Power

To set the printer to standby mode

Press the  button. The standby lamp goes out, and the printer is set to standby mode.

To turn off the camera

Turn off the camera by pressing the  button. The camera stores the latest settings data in memory and automatically shuts down completely.

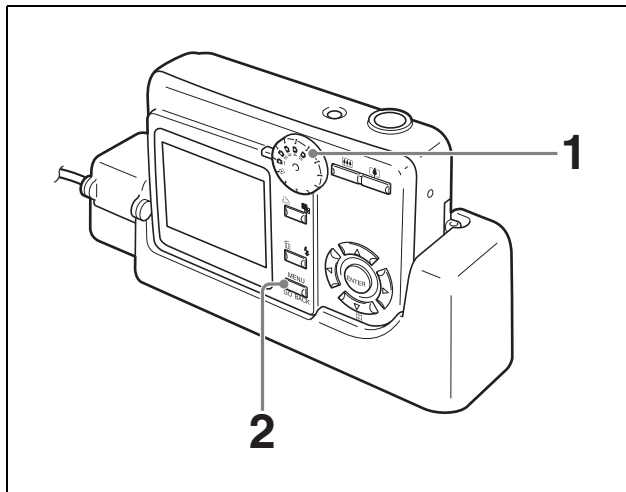
Note

If you cut off the power supply by disconnecting the AC power adaptor or removing the batteries while the camera transfers settings data to memory, any new settings may be lost, and the camera may revert to its previous settings.

Settings

There are three types of camera menus: the Capture mode MENU for setting shooting conditions, the Playback mode MENU for settings related to captured images, and the SETUP menu for configuring the camera itself.

Displaying the MENU Screen in Capture Mode

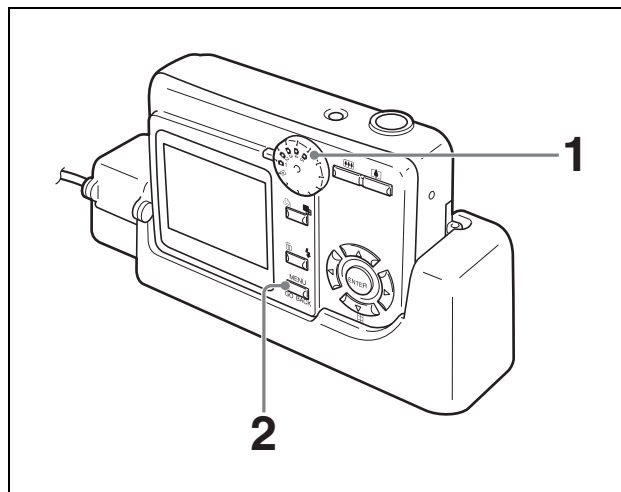


- 1 Set the mode dial to 1 – 5.
- 2 Press the MENU/GO BACK button.
The MENU screen for Capture mode appears.

To exit the menu and return to the previous screen

Press the MENU/GO BACK button.

Displaying the MENU Screen in Playback Mode



- 1 Set the mode dial to .
- 2 Press the MENU/GO BACK button.
The MENU screen for Playback mode appears.

Note

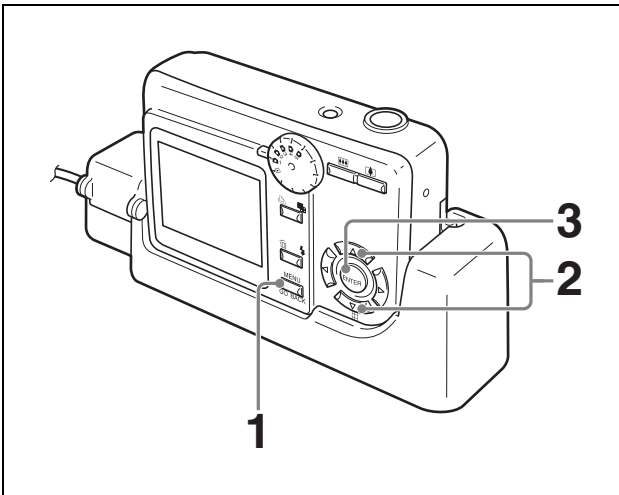
When no pictures have been stored in memory, the MENU screen for Playback mode does not appear.

To exit the menu and return to the previous screen

Press the MENU/GO BACK button.

Displaying the SETUP Screen

The SETUP screen can be displayed regardless of whether the mode dial is set to **1** – **5** or **1**.



- 1** Press the MENU/GO BACK button. The MENU screen appears.
- 2** Select SETUP by pressing the ▲ or ▼ control button.
- 3** Press the ENTER button. The SETUP screen appears.

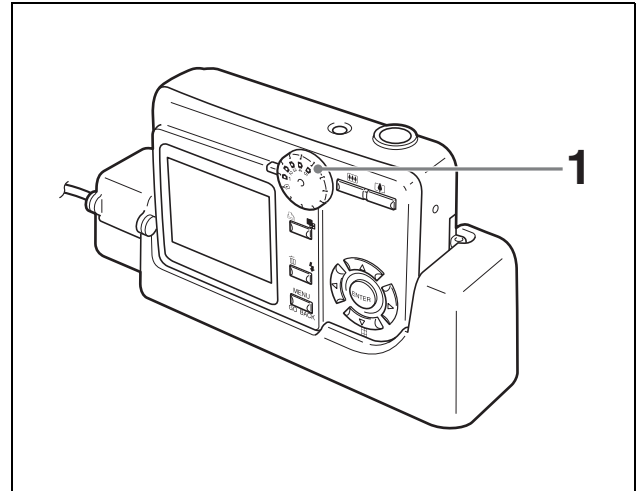
To exit the menu and return to the previous screen

Press the MENU/GO BACK button.

Storing Custom Settings for Each MENU in Capture Mode

On this camera, each of the mode dial positions **1** – **5** stores a custom setting for the Capture mode MENU.

The custom settings are stored under any of the five **1** – **5** marks on the mode dial. Because the custom settings remain in memory even if the camera is turned off, they can always be recalled later when shooting.



- 1** Before customizing the settings in the MENU, select one of the five locations **1** – **5** on the mode dial to store the custom setting.
- 2** Customize the settings.
- 3** Exit the MENU screen and return to the Capture mode display. Then, press the ENTER button.

Your customized settings are stored in the location you selected. Setting values are saved when you press the ENTER button.

To recall stored custom settings

Set the mode dial to the **1** – **5** mark for the location where the custom settings are stored.

Note

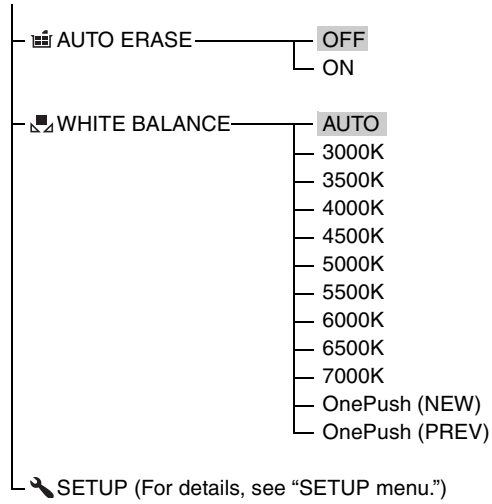
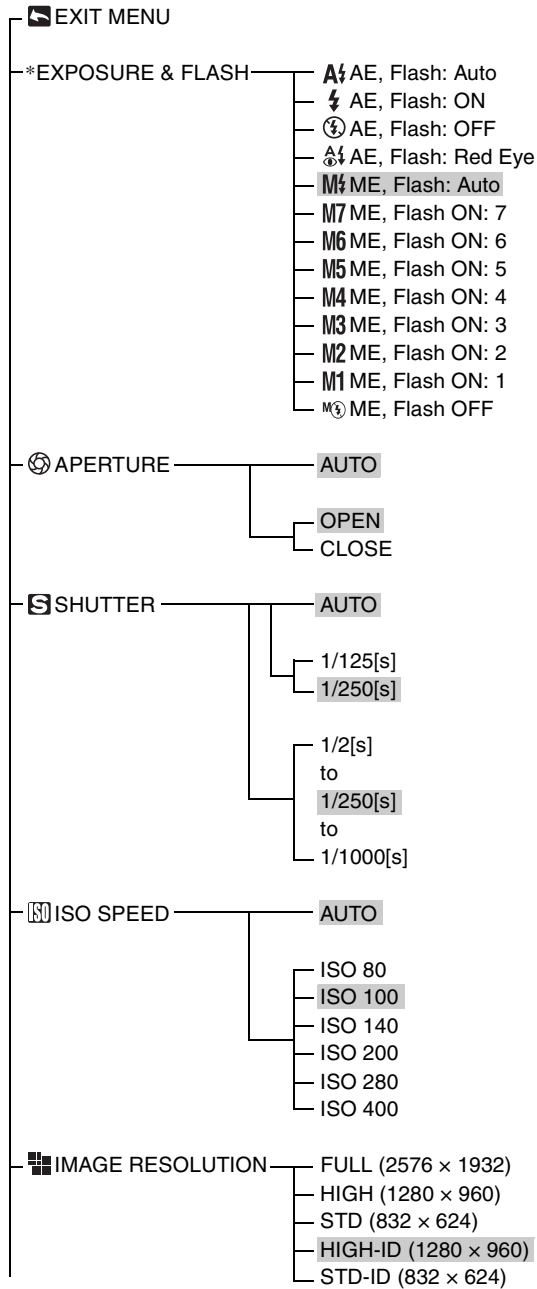
If you cut off the power supply without pressing the **1** button, such as by removing the batteries during use or by disconnecting the AC power adaptor, your custom settings may not be stored properly.

Menus

Menu Configuration

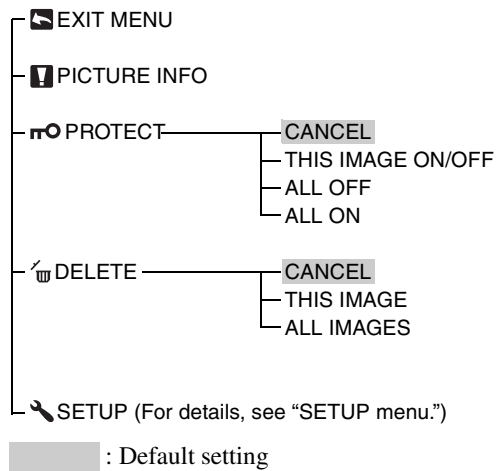
Camera

Capture mode



* The displayed icon changes according to the selected setting.

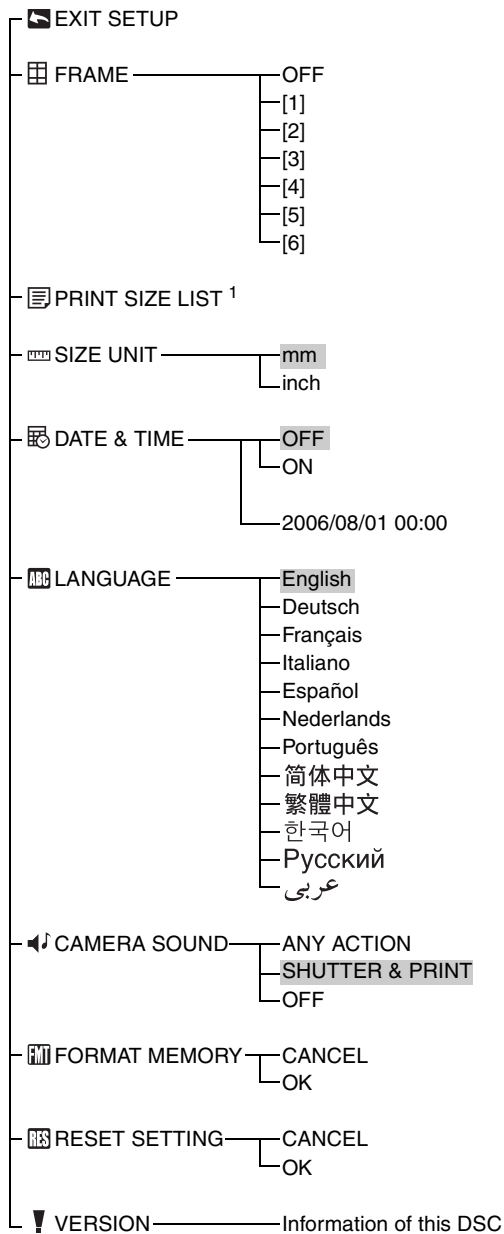
Playback mode



: Default setting

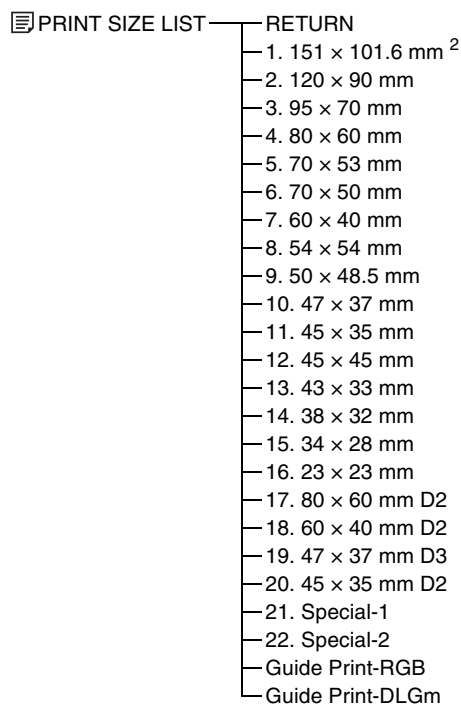
SETUP menu

The SETUP menu is common to the MENU for Capture mode and the MENU for Playback mode.



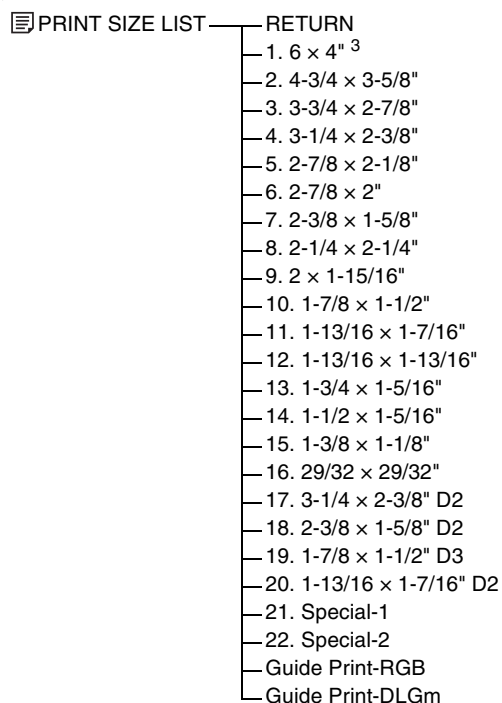
 : Default setting

1) When SIZE UNIT is set to mm



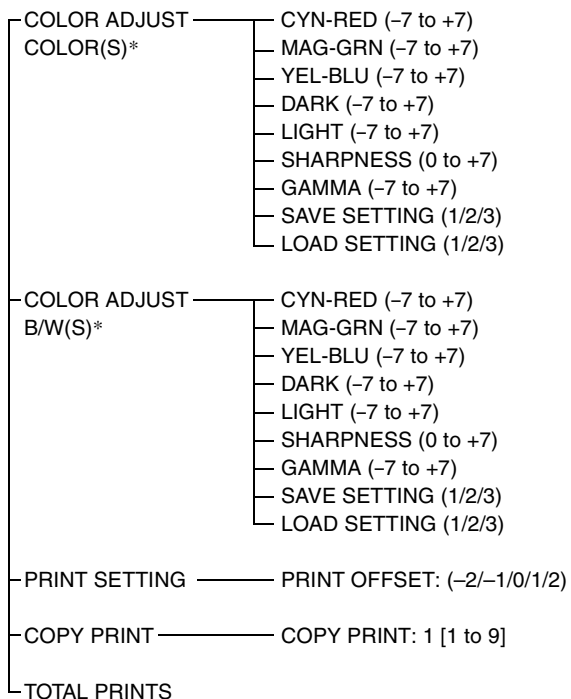
2) With the UPC-X45 series, print size changes to 120 × 97.5 mm.

1) When SIZE UNIT is set to inch



3) With the UPC-X45 series, print size changes to 4-3/4 × 3-7/8".









Printer



* When UPC-X45 series print paper is used, (S) is displayed.

Functions of the Menu Items






Capture mode

Menu Item	Function	Settings
 EXIT MENU	Exits Menu mode.	—
*EXPOSURE & FLASH	Selects the exposure control method and flash mode.	A AE, Flash: Auto ⚡ AE, Flash: ON Ⓞ AE, Flash: OFF ⚡ AE, Flash: Red Eye Reduction M Manual Exposure (ME), Flash: Auto M7 – M1 Manual Exposure (ME), Flash ON: 7 – 1 M Manual Exposure (ME), Flash OFF: 0
 APERTURE	Selects the aperture setting.	AUTO (at AE Mode): Auto Adjust OPEN (at ME Mode) OPEN (at ME Mode)
 SHUTTER	Selects the shutter speed.	AUTO (at AE Mode & ME, Flash Auto) 1/125 [s] or 1/250 [s] (at ME & Flash ON) 1/2 – 1/1000 [s] (at ME & Flash OFF)
 ISO SPEED	Selects the ISO sensitivity.	AUTO (at AE Mode): Auto Adjust ISO 80 (at ME Mode) ISO 100 (at ME Mode) ISO 140 (at ME Mode) ISO 200 (at ME Mode) ISO 280 (at ME Mode) ISO 400 (at ME Mode)
 IMAGE RESOLUTION	Selects the resolution for recording.	FULL (2576 × 1932) HIGH (1280 × 960) STD (832 × 624) HIGH-ID (1280 × 960) STD-ID (832 × 624)
 AUTO ERASE	Sets the auto erase mode.	OFF When memory becomes full, pictures can no longer be taken. ON When memory becomes full, data is deleted in order from the oldest when new picture data is stored.
 WHITE BALANCE	Adjusts the white balance.	AUTO: Adjusted automatically 3000K/3500K/4000K/4500K/5000K/5500K/6000K/ 6500K/7000K: The white balance is adjusted for the selected color temperature. OnePush (NEW): A new image is captured as the reference value for white. OnePush (PREV): Uses the previously captured reference value for white.
 SETUP	To display the SETUP menu.	(For details, see “SETUP menu” on page 36.)

MENU Lock: Press and hold the MENU/GO BACK button to lock or unlock the MENU.

* The displayed icon changes according to the selected setting.

Playback mode

Menu Item	Function	Settings
 EXIT MENU	Exits the MENU mode.	—
 PICTURE INFO	Displays the following information for the displayed picture. Exposure Mode, Shutter Speed, Aperture, ISO Speed, EV Compensation, White Balance, Date & Time*	—
 PROTECT	Sets or cancels protection for the displayed picture or all pictures.	THIS IMAGE ON/OFF ALL OFF ALL ON
 DELETE	Deletes the displayed picture or all pictures stored in memory. However, any picture for which protection is set is not deleted.	THIS IMAGE ALL IMAGES
 SETUP	Displays the SETUP menu.	(For details, see “SETUP menu” on page 36.)

MENU Lock: Press and hold the MENU/GO BACK button to lock or unlock the MENU.

* Only when shooting and when currently turned ON in the SETUP menu.

SETUP menu

Menu Item	Function	Settings																																																		
EXIT SETUP	Exits SETUP mode and returns to the previous Menu display.	—																																																		
FRAME	When the image resolution is set to HIGH-ID or STD-ID, selects the frame to use as guidelines.	OFF: No guidelines are displayed. [1]: Frame 1 is displayed. [2]: Frame 2 is displayed. [3]: Frame 3 is displayed. [4]: Frame 4 is displayed. [5] (LINE1/LINE2/LINE3): The positions of the three horizontal guidelines are adjustable. [6] (WIDTH): The space between the two vertical guidelines is adjustable.																																																		
PRINT SIZE LIST	Selects the print layout shown on the LCD when the layout preview screen is displayed. By default, all items can be displayed and selected.	<table border="1"> <thead> <tr> <th>(Size Unit mm)</th> <th>(Size Unit inch)</th> </tr> </thead> <tbody> <tr><td>1. 151 × 101.6 mm*</td><td>1. 6 × 4"***</td></tr> <tr><td>2. 120 × 90 mm</td><td>2. 4-3/4 × 3-5/8"</td></tr> <tr><td>3. 95 × 70 mm</td><td>3. 3-3/4 × 2-7/8"</td></tr> <tr><td>4. 80 × 60 mm</td><td>4. 3-1/4 × 2-3/8"</td></tr> <tr><td>5. 70 × 53 mm</td><td>5. 2-7/8 × 2-1/8"</td></tr> <tr><td>6. 70 × 50 mm</td><td>6. 2-7/8 × 2"</td></tr> <tr><td>7. 60 × 40 mm</td><td>7. 2-3/8 × 1-5/8"</td></tr> <tr><td>8. 54 × 54 mm</td><td>8. 2-1/4 × 2-1/4"</td></tr> <tr><td>9. 50 × 48.5 mm</td><td>9. 2 × 1-15/16"</td></tr> <tr><td>10. 47 × 37 mm</td><td>10. 1-7/8 × 1-1/2"</td></tr> <tr><td>11. 45 × 35 mm</td><td>11. 1-13/16 × 1-7/16"</td></tr> <tr><td>12. 45 × 45 mm</td><td>12. 1-13/16 × 1-13/16"</td></tr> <tr><td>13. 43 × 33 mm</td><td>13. 1-3/4 × 1-5/16"</td></tr> <tr><td>14. 38 × 32 mm</td><td>14. 1-1/2 × 1-5/16"</td></tr> <tr><td>15. 34 × 28 mm</td><td>15. 1-3/8 × 1-1/8"</td></tr> <tr><td>16. 23 × 23 mm</td><td>16. 29/32 × 29/32"</td></tr> <tr><td>17. 80 × 60 mm D2</td><td>17. 3-1/4 × 2-3/8" D2</td></tr> <tr><td>18. 60 × 40 mm D2</td><td>18. 2-3/8 × 1-5/8" D2</td></tr> <tr><td>19. 47 × 37 mm D3</td><td>19. 1-7/8 × 1-1/2" D3</td></tr> <tr><td>20. 45 × 35 mm D2</td><td>20. 1-13/16 × 1-7/16" D2</td></tr> <tr><td>21. Special-1</td><td>21. Special-1</td></tr> <tr><td>22. Special-2</td><td>22. Special-2</td></tr> <tr><td>Guide Print-RGB</td><td>Guide Print-RGB</td></tr> <tr><td>Guide Print-DLGm</td><td>Guide Print-DLGm</td></tr> </tbody> </table>	(Size Unit mm)	(Size Unit inch)	1. 151 × 101.6 mm*	1. 6 × 4"***	2. 120 × 90 mm	2. 4-3/4 × 3-5/8"	3. 95 × 70 mm	3. 3-3/4 × 2-7/8"	4. 80 × 60 mm	4. 3-1/4 × 2-3/8"	5. 70 × 53 mm	5. 2-7/8 × 2-1/8"	6. 70 × 50 mm	6. 2-7/8 × 2"	7. 60 × 40 mm	7. 2-3/8 × 1-5/8"	8. 54 × 54 mm	8. 2-1/4 × 2-1/4"	9. 50 × 48.5 mm	9. 2 × 1-15/16"	10. 47 × 37 mm	10. 1-7/8 × 1-1/2"	11. 45 × 35 mm	11. 1-13/16 × 1-7/16"	12. 45 × 45 mm	12. 1-13/16 × 1-13/16"	13. 43 × 33 mm	13. 1-3/4 × 1-5/16"	14. 38 × 32 mm	14. 1-1/2 × 1-5/16"	15. 34 × 28 mm	15. 1-3/8 × 1-1/8"	16. 23 × 23 mm	16. 29/32 × 29/32"	17. 80 × 60 mm D2	17. 3-1/4 × 2-3/8" D2	18. 60 × 40 mm D2	18. 2-3/8 × 1-5/8" D2	19. 47 × 37 mm D3	19. 1-7/8 × 1-1/2" D3	20. 45 × 35 mm D2	20. 1-13/16 × 1-7/16" D2	21. Special-1	21. Special-1	22. Special-2	22. Special-2	Guide Print-RGB	Guide Print-RGB	Guide Print-DLGm	Guide Print-DLGm
(Size Unit mm)	(Size Unit inch)																																																			
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22. Special-2	22. Special-2																																																			
Guide Print-RGB	Guide Print-RGB																																																			
Guide Print-DLGm	Guide Print-DLGm																																																			
SIZE UNIT	Changes the unit size for the display.	mm inch																																																		
DATE & TIME	Sets whether to display the date and time.	ON (Year/Month/Day Hour:Min) OFF																																																		
LANGUAGE	Selects the language.	English/Deutsch/Français/Italiano/Español/Nederlands/Portugêus / 简体中文/繁體中文 / 한국어/Русский/عربي																																																		
CAMERA SOUND	Turns the operation sound on or off.	ANY ACTION SHUTTER & PRINT OFF																																																		
FORMAT MEMORY	Deletes all pictures stored in memory.	—																																																		
RESET SETTING	Returns all camera settings to their default values.	—																																																		
VERSION	Displays the camera version.	—																																																		

* With the UPC-X45 series, print size changes to 120 × 97.5 mm.

**With the UPC-X45 series, print size changes to 4-3/4 × 3-7/8".

Printer

Menu item	Function	Settings
COLOR ADJUST COLOR	Adjusts the print quality for color pictures.	CYN-RED: Adjusts cyan and red. MAG-GRN: Adjusts magenta and green. YEL-BLU: Adjusts yellow and blue. DARK: Adjusts the brightness of dark areas. LIGHT: Adjusts the brightness of light areas. SHARPNESS: Adjusts the sharpness of object contours.
COLOR ADJUST B/W	Adjusts the print quality for black & white pictures.	GAMMA: Adjusts the tone of the image. SAVE SETTING (1/2/3): Stores adjusted values in the internal memory. LOAD SETTING (1/2/3): Loads adjusted values stored in memory.
PRINT SETTING	Fine tunes the printing position for the UPC-X46 series print paper.	PRINT OFFSET (-2/-1/0/1/2) The printing position can be adjusted in units of 0.5 mm (1/32"). PRINT TEST Prints a color pattern.
COPY PRINT	Reprints the last picture stored in memory.	[1 – 9] Sets the number of sheets to reprint.
TOTAL PRINTS	Displays the total number of sheets printed.	—

Setting the Shooting Conditions

The shooting conditions of the camera are factory set to Manual Exposure, Flash: Auto, but you can change the shooting conditions using the menus as necessary.

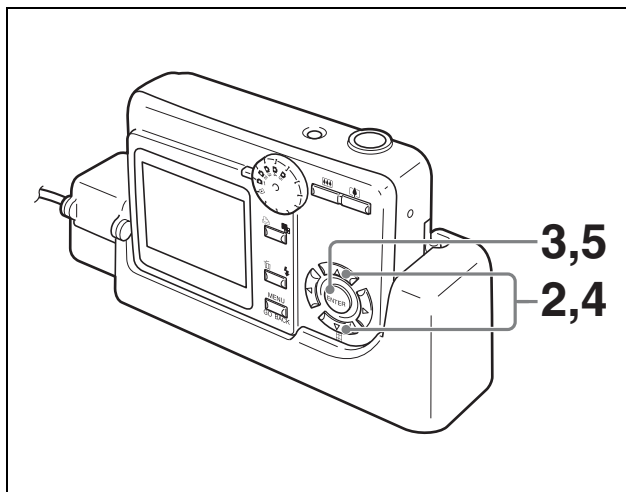
The shooting conditions available for configuration differ depending on the exposure control and flash settings, as shown in the table below.

EXPOSURE & FLASH Mode	Flash Control	Prelighting/Prephotometry	Aperture	Shutter Speed	ISO Sensitivity	White Balance	Exposure Compensation
Auto Flash* A ⚡	Auto with Preflash	Prephotometry Prelighting	Auto	Auto	Auto	Auto	+/-2.0EV by 1/3EV Step (Shutter Control) +2.0EV +1.7EV +1.3EV +1.0EV +0.7EV +0.3EV ±0.0EV -0.3EV -0.7EV -1.0EV -1.3EV -1.7EV -2.0EV
Flash ON* ⚡		Prephotometry Prelighting					
Flash OFF Ⓜ	No Lighting	Prephotometry No lighting					
RED EYE* Ⓜ ⚡	Auto with Preflash	Prephotometry Red Eye Reduction Lighting					
Controlled Flash without pre-flash M ⚡	Auto with Zoom and EV	No Prephotometry No Prelighting Lighting Only when Shooting	Fixed (Open)	Fixed (1/250)	Auto with Zoom and EV	Auto	+/-2.0EV by 1/3EV Step
Forced Flash without pre-flash M7 - M1	7 steps (100/70/50/35/25/18/12%) without Preflash	No Prephotometry No Prelighting Lighting at Set Level Only when Shooting	Open (Open or Closed)	1/250 (1/250 or 1/125)	ISO 100 (ISO 80, 100, 200, 400)	5500K (3000 to 7000K or OnePush)	EV compensation disabled
Exhibit Flash M Ⓜ	No Lighting	No Prephotometry No Lighting	Open (Open or Closed)	1/250 (1/2 to 1/1000 [s])	ISO 100 (ISO 80, 100, 140, 200, 280, 400)	Auto (Auto, 3000 to 7000K, OnePush)	EV compensation disabled

█ : Default setting

* When shooting in a dimly lit environment, switching the exposure compensation will not change the exposure level.

To select the exposure control and flash mode (EXPOSURE & FLASH)



- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select EXPOSURE & FLASH by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The EXPOSURE & FLASH screen appears.
- 4 Select the control mode by pressing the ▲ or ▼ control button.
For details on each mode, see “Flash Modes and Example Shooting Conditions” on page 39.
- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

To change the EXPOSURE & FLASH mode easily

When the mode dial is set to **1** – **5**, you can easily cycle through the EXPOSURE & FLASH modes in menu order by pressing the **⏏/⚡** button.

To adjust exposure easily

When the mode dial is set to **1** – **5** and the **◀▶** mark appears under the exposure compensation value (EV) at the top right of the LCD, the exposure can easily be adjusted by pressing the **◀** or **▶** control button.

Flash Modes and Example Shooting Conditions

The camera offers seven flash modes.

When setting up, make sure the distance between the camera and the subject (L) is set so that apparent face size fits the selected frame (guidelines) at about 1 meter. Minor adjustments to apparent face size can be made with the zoom.

For details on setting the frame, see “Setting the Frame (FRAME)” on page 45.

Auto flash + auto exposure mode (A[⚡])

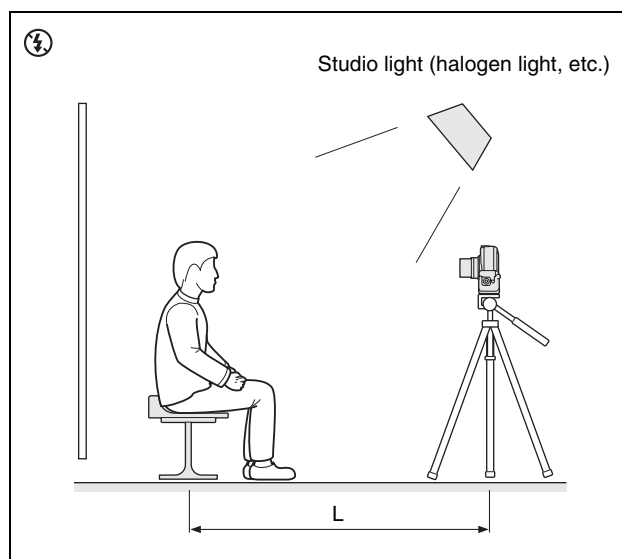
When the subject is not bright enough, the flash automatically fires. This mode is suitable for both outdoor and indoor portrait shots.

Forced flash + auto exposure mode (⚡)

The built-in flash always fires. The camera measures the brightness of the subject with prelighting, and then the flash fires at the optimum brightness. The exposure and shutter speed are automatically adjusted. This mode is suitable for both outdoor and indoor portrait shots.

No flash + auto exposure mode (Ⓢ)

The built-in flash does not fire. This mode is suitable for shooting indoors with an automatic exposure setting under stable light sources, such as studio light, video light, and fluorescent light.



Red-eye reduction flash + auto exposure mode (A₄)

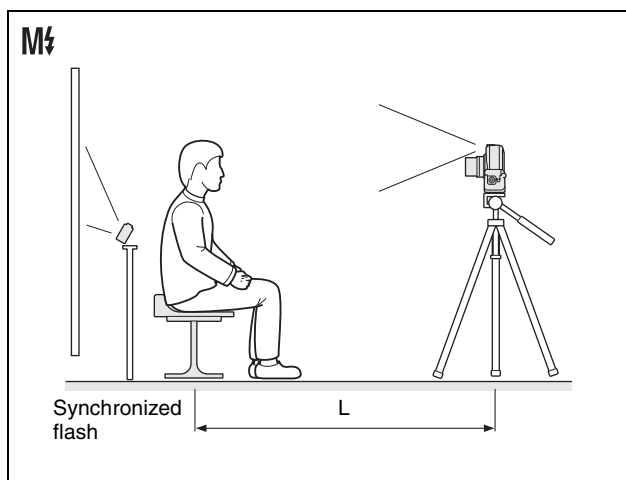
This mode is designed to alleviate the tendency for the subject's eyes to appear red when shooting with the flash in a dark environment.

When the surroundings are dark, the automatic firing of the built-in flash is the same as that for the auto flash + auto exposure mode (A₄). But with red-eye reduction flash + auto exposure mode (A₄), a second flash fires before the picture is taken to eliminate red-eye.

Auto flash + manual exposure mode (M₄)

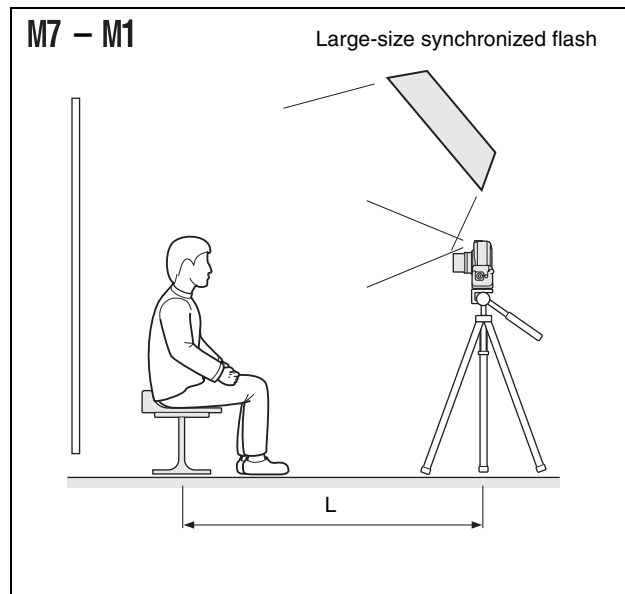
The built-in flash fires at optimum brightness for a subject about 1 meter away.

Use the ◀ and ▶ control buttons to set a negative EV value when the distance L is less than 1 meter, or a positive EV value when the distance is more than 1 meter. Be sure to take a test picture to check the results. This mode is suitable for indoor ID portraits in which the built-in flash is the main light source and a shadow-clearing flash is connected to the camera by synchronization cord.



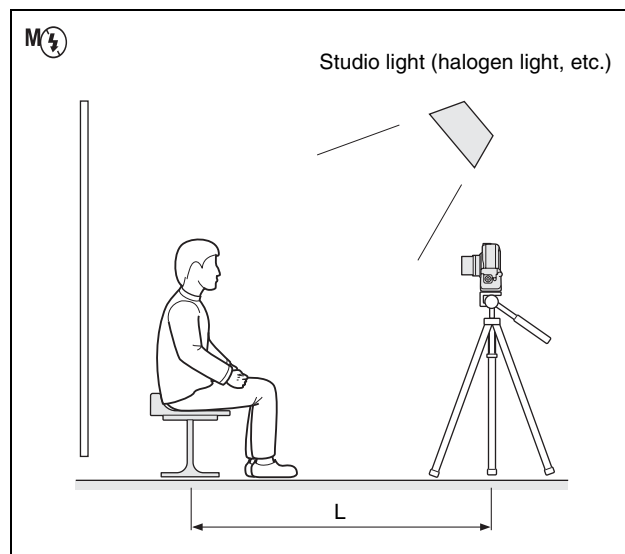
Forced flash + manual exposure mode (M7 - M1)

You can manually set aperture, shutter speed, and ISO sensitivity, and select one of seven flash intensity levels ($\triangleleft 0.5EV$) for the built-in flash before shooting. This mode is suitable for shooting portraits in which the built-in flash acts as a trigger for the main light source, an external flash connected to the camera by synchronization cord.




No flash + manual exposure mode (M₄)

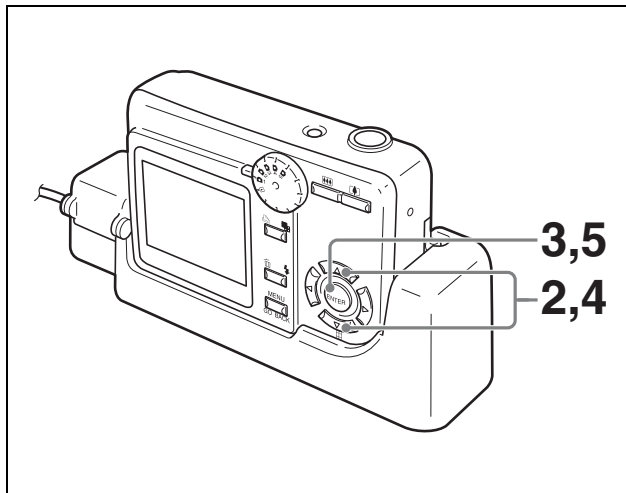
In this exposure mode, the aperture, shutter speed, and ISO sensitivity are set manually, and the built-in flash does not fire. This mode enables shooting with a more stable exposure than the No Flash + Auto Exposure mode (A₄).




Setting the Aperture

(APERTURE)


You can only set the aperture when the EXPOSURE & FLASH mode is set to M7 – M1 or .

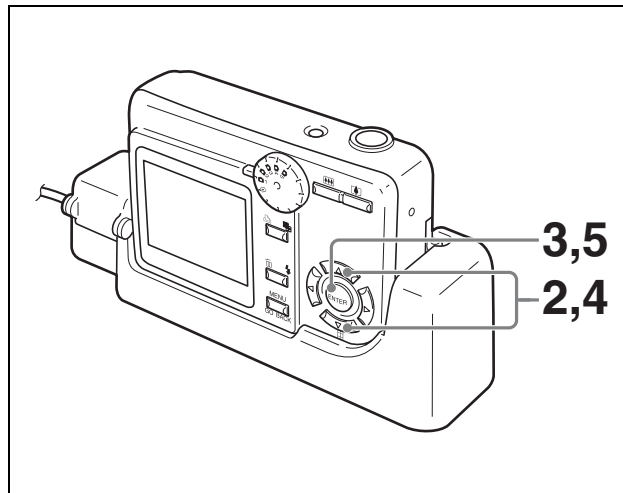




- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select  APERTURE by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The APERTURE screen appears.
- 4 Select OPEN/CLOSE by pressing the ▲ or ▼ control button.
- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

Setting the Shutter Speed


(SHUTTER)

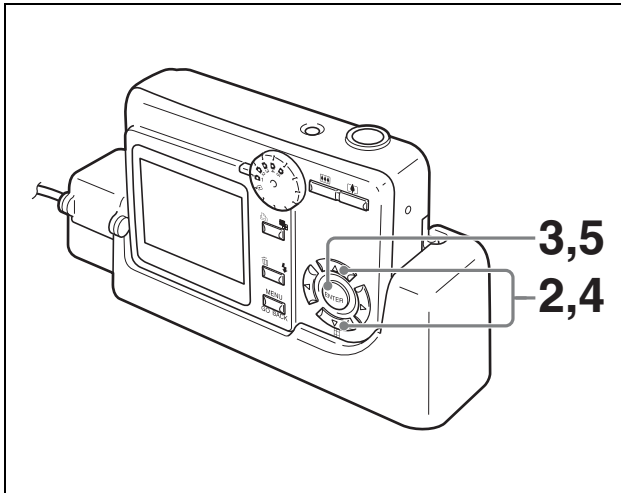
You can only set the shutter speed when the EXPOSURE & FLASH mode is set to M7 – M1 or .




- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select  SHUTTER by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The SHUTTER screen appears.
- 4 Select a shutter speed by pressing the ▲ or ▼ control button.
M7 to M1: Select from 1/250 (s) or 1/125 (s).
: Select from 1/2 (s), 1/4 (s), 1/8 (s), 1/15 (s), 1/30 (s), 1/60 (s), 1/100 (s), 1/125 (s), 1/250 (s), 1/500 (s), 1/750 (s), or 1/1000 (s).
- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

Setting the ISO Sensitivity (ISO SPEED)

You can only set the ISO sensitivity when the EXPOSURE & FLASH mode is set to M7 – M1 or .

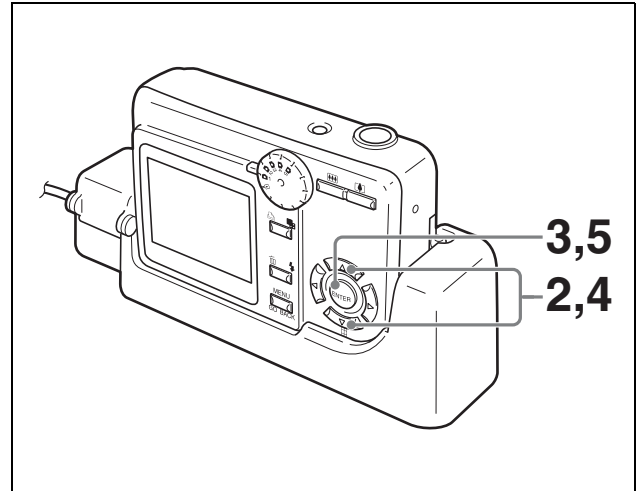



- 1 Display the MENU screen for Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select  ISO SPEED by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The ISO SPEED screen appears.
- 4 Select an ISO sensitivity by pressing the ▲ or ▼ control button.
 - ISO 80
 - ISO 100
 - ISO 140
 - ISO 200
 - ISO 280
 - ISO 400
- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

Setting the Image Resolution (IMAGE RESOLUTION)

Select the optimal image resolution for your print size.

For details on the optimal print size for each print size, see “Recommended recording resolutions” on page 43.



- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select  IMAGE RESOLUTION by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The IMAGE RESOLUTION screen appears.
- 4 Select one of the following resolutions by pressing the ▲ or ▼ control button.
 - FULL:** 2576 × 1932 (approximately 10 pictures can be taken)
 - HIGH:** 1280 × 960 (approximately 40 pictures can be taken)
 - STD:** 832 × 624 (approximately 73 pictures can be taken)
 - HIGH-ID:** 1280 × 960 (approximately 40 pictures can be taken)
 - STD-ID:** 832 × 624 (approximately 73 pictures can be taken)

When HIGH-ID or STD-ID is selected, the angle of view switches to a display suitable for ID portraits, and guidelines (FRAME) can be displayed to help align the position of a subject’s face when shooting. Under normal circumstances, the number of pictures listed above for each resolution can be taken, but the number may decrease if pictures containing complex patterns are included. In Capture mode, refer to the value displayed at the bottom left of the LCD.

- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

💡 When the mode dial is set to 📷1 – 📷5, the resolution setting changes with each press of the / button.

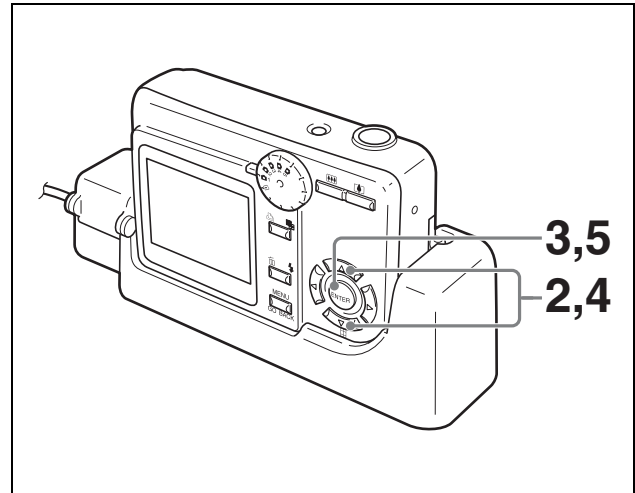
Recommended recording resolutions

Size No. (see “Print Layouts” on page 6)	Recording Resolution				
	FULL	HIGH	STD	HIGH-ID	STD-ID
1	⊙	△	×	△	×
2	⊙	△	×	△	×
3	⊙	△	×	△	×
4	○	⊙	△	⊙	△
5	○	⊙	△	⊙	△
6	○	⊙	△	⊙	△
7	○	⊙	△	⊙	△
8	○	⊙	△	⊙	△
9	○	⊙	△	⊙	△
10	○	○	⊙	○	⊙
11	○	○	⊙	○	⊙
12	○	⊙	△	⊙	△
13	○	○	⊙	○	⊙
14	○	○	⊙	○	⊙
15	○	○	⊙	○	⊙
16	○	○	⊙	○	⊙
17	○	⊙	△	⊙	△
18	○	⊙	△	⊙	△
19	○	○	⊙	○	⊙
20	○	○	⊙	○	⊙
21	⊙	△	×	△	×
22	○	⊙	△	⊙	△

- ⊙: The optimal combination of recording resolution and print size. This is the recommended resolution for taking a picture when the print size is known beforehand.
- : The recording resolution is higher than required for the print size. To store the maximum number of pictures in memory, taking pictures at the resolution indicated by ⊙ is recommended.
- △: The recording resolution is a little low for the print size, but the print quality can be adjusted to an acceptable level.
- ×: The recording resolution is much too low for the print size. Printing at this size is not recommended.

Setting the Auto Erase Mode (AUTO ERASE)

You can select the action performed by the camera when the memory is full.



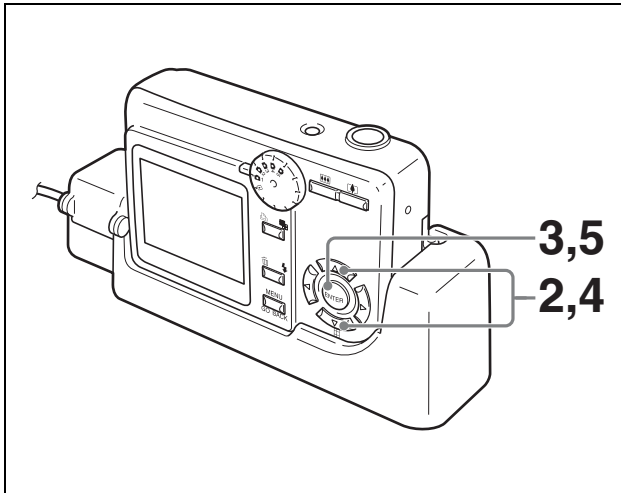
- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select AUTO ERASE by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The AUTO ERASE screen appears.
- 4 Select OFF or ON by pressing the ▲ or ▼ control button.
OFF: Shooting is disabled when the memory is full.
ON: When the memory is full, stored images are deleted automatically starting with the oldest, and new image data is stored.
- 5 Press the ENTER button.
The MENU screen for Capture mode reappears.

Note

Images that are protected against deletion are not automatically deleted.
If the memory is filled up with images that are all protected against deletion, any further pictures taken will not be saved, even with auto erase mode turned on.

Adjusting the White Balance (WHITE BALANCE)

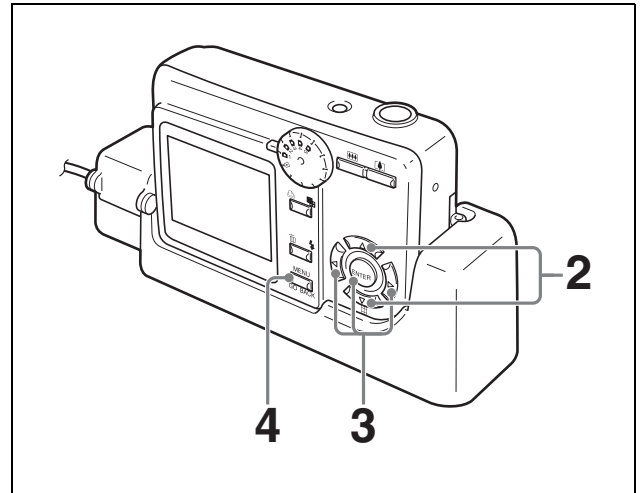
You can only set the white balance when the EXPOSURE & FLASH mode is set to M7 – M1 or M3.



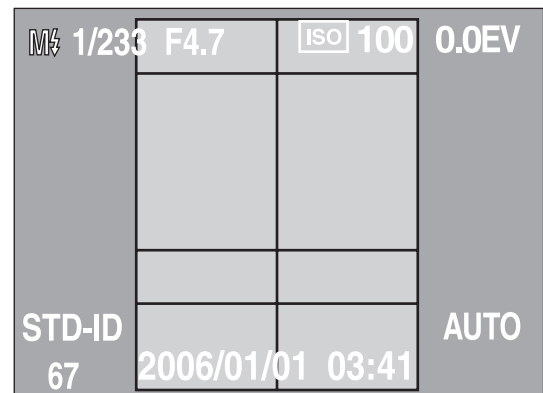
- 1 Display the MENU screen in Capture mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Capture Mode” on page 29.
- 2 Select WHITE BALANCE by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The WHITE BALANCE screen appears.
- 4 Select the method for adjusting the white balance by pressing the ▲ or ▼ control button.
AUTO: The white balance is adjusted automatically.
3000K to 7000K: Select a color temperature to suit the lighting conditions. You can select color temperatures between 3000K and 7000K in units of 500K. The white balance is adjusted according to the selected color temperature.
OnePush (NEW): A new image is captured as the reference value for white. Under the same lighting conditions that you use for taking pictures, display a white object (such as a piece of paper or cloth) in the center of the LCD, and then press the release button or the ENTER button. The white balance is captured and adjusted for the current lighting conditions.
OnePush (PREV): Uses the previous white balance value captured with One Push (NEW).
- 5 Press the ENTER button.
The selected white balance setting is saved, and the MENU screen for Capture mode reappears.

Viewing Information on Captured Images (PICTURE INFO)

You can view information about captured images, including EXPOSURE & FLASH mode settings, on the LCD.



- 1 Display the MENU screen in Playback mode.
For details on displaying the MENU screen, see “Displaying the MENU Screen in Playback Mode” on page 29.
- 2 Select PICTURE INFO by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The PICTURE INFO screen appears.
You can select images by pressing the ◀ or ▶ control button.



- 4 Press the MENU/GO BACK or ENTER button.
The MENU screen for Playback mode reappears.

Note

Printing cannot be performed from the PICTURE INFO screen. Return to the Playback mode display to perform printing.

Setting the Frame (☒ FRAME)

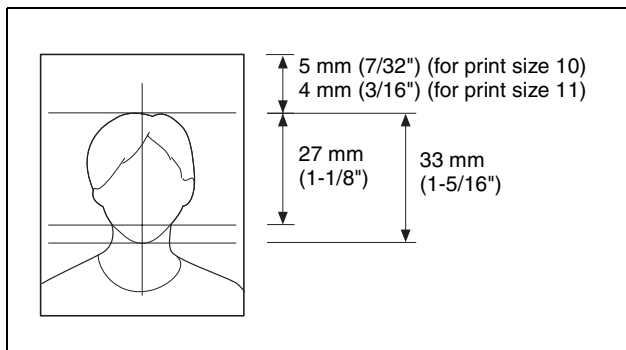
When the image resolution is set to HIGH-ID or STD-ID, guidelines can be displayed on the LCD to help you adjust the size and position of the subject when framing a picture. This camera offers six types of frame guidelines: four fixed types, one type with three adjustable horizontal guidelines, and one type with two adjustable vertical guidelines.

Fixed frame guidelines

The following four types of fixed frame guidelines are available.

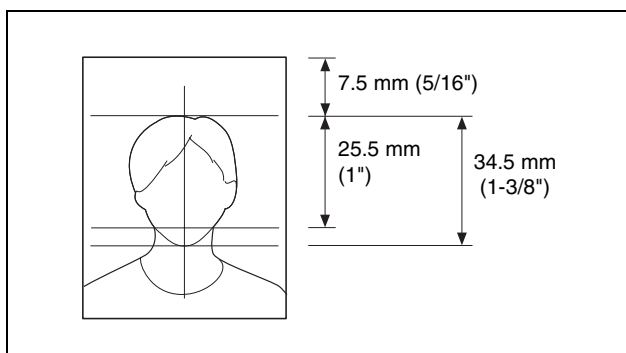
FRAME-[1]

When you select print sizes 10 (47 × 37 mm, 1-7/8 × 1-1/2") or 11 (45 × 35 mm, 1-13/16 × 1-7/16"), the distance between the head and chin lines is 27 mm (1-1/8") and 33 mm (1-5/16").



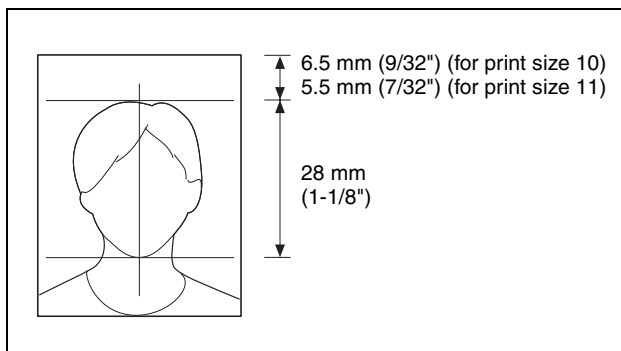
FRAME-[2]

In this frame, two chin lines are displayed. When you select print size 8 (54 × 54 mm, 2-1/4 × 2-1/4"), the distance between the head and chin lines is 25.5 mm (1") or 34.5 mm (1-3/8").



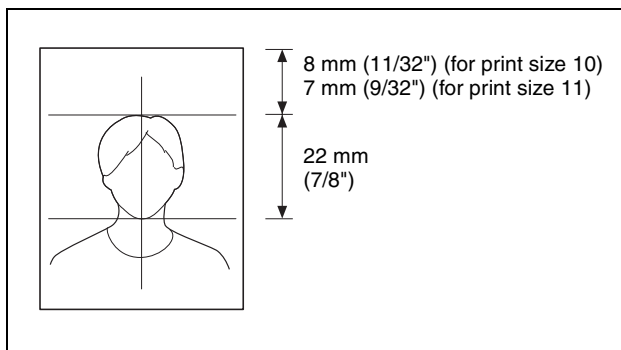
FRAME-[3]

When you select print sizes 10 (47 × 37 mm, 1-7/8 × 1-1/2") or 11 (45 × 35 mm, 1-13/16 × 1-7/16"), the distance between the head and chin lines is 28 mm (1-1/8").



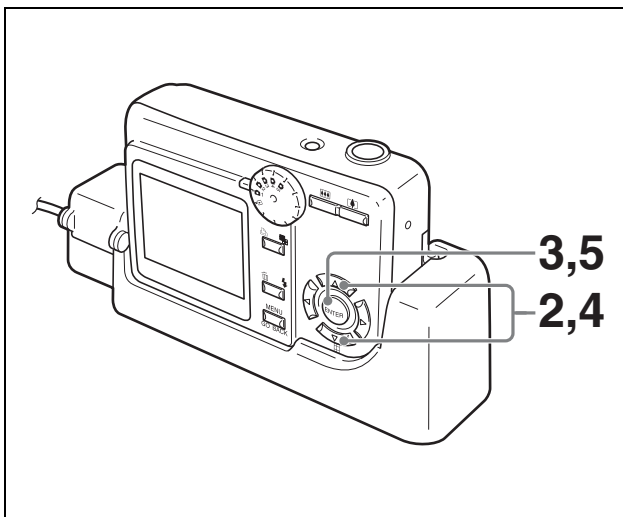
FRAME-[4]


When you select print sizes 10 (47 × 37 mm, 1-7/8 × 1-1/2") or 11 (45 × 35 mm, 1-13/16 × 1-7/16"), the distance between the head and chin lines is 22 mm (7/8").



For the dimensions of other print sizes, see "Dimensions for FRAME-[1], FRAME-[2], FRAME-[3], and FRAME-[4] prints" on page 47.

**To use the fixed frame guidelines
(FRAME-[1], FRAME-[2], FRAME-[3],
FRAME-[4])**



- 1** Display the SETUP screen.
*For details on displaying the SETUP screen, see
“Displaying the SETUP Screen” on page 30.*
- 2** Select  FRAME by pressing the ▲ or ▼ control button.
- 3** Press the ENTER button.
The frame selection screen appears.
- 4** Select FRAME-[1], FRAME-[2], FRAME-[3], or FRAME-[4] by pressing the ▲ or ▼ control button.
The guidelines for the selected frame appear on the LCD.
- 5** Press the ENTER button.
The SETUP screen reappears.

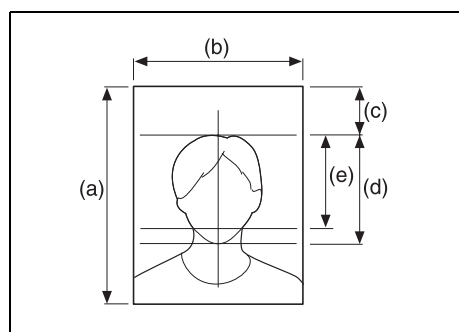
Dimensions for FRAME-[1], FRAME-[2], FRAME-[3], and FRAME-[4] prints

When shooting pictures with the FRAME-[1], FRAME-[2], FRAME-[3], or FRAME-[4] guidelines, the approximate dimensions of the prints are as follows.

Tolerance: $\pm 3\%$

Print size		FRAME-[1]			FRAME-[2]			FRAME-[3]		FRAME-[4]		
Size No.	(a) mm (inches)	(b) mm (inches)	(c) mm (inches)	(d) mm (inches)	(e) mm (inches)	(c) mm (inches)	(d) mm (inches)	(e) mm (inches)	(c) mm (inches)	(d) mm (inches)	(c) mm (inches)	(d) mm (inches)
1 (X46)	151 (6)	101.6 (4)	23.0 ($\frac{29}{32}$)	96.0 ($\frac{37}{8}$)	78.0 ($\frac{31}{8}$)	36.0 ($\frac{17}{16}$)	73.0 ($\frac{27}{8}$)	54.0 ($\frac{21}{4}$)	27.0 ($\frac{11}{8}$)	81.0 ($\frac{31}{4}$)	31.0 ($\frac{11}{4}$)	65.0 ($\frac{25}{8}$)
1 (X45)	120 ($\frac{43}{4}$)	97.5 ($\frac{37}{8}$)	14.5 ($\frac{19}{32}$)	82.0 ($\frac{31}{4}$)	67.0 ($\frac{23}{4}$)	25.5 ($\frac{11}{16}$)	62.0 ($\frac{21}{2}$)	46.0 ($\frac{113}{16}$)	18.0 ($\frac{23}{32}$)	69.0 ($\frac{23}{4}$)	21.5 ($\frac{7}{8}$)	55.0 ($\frac{21}{4}$)
2	120 ($\frac{43}{4}$)	90 ($\frac{35}{8}$)	16.5 ($\frac{21}{32}$)	78.5 ($\frac{31}{8}$)	64.0 ($\frac{25}{8}$)	27.0 ($\frac{11}{8}$)	59.5 ($\frac{23}{8}$)	44.0 ($\frac{13}{4}$)	20.0 ($\frac{13}{16}$)	66.0 ($\frac{25}{8}$)	23.0 ($\frac{29}{32}$)	53.0 ($\frac{21}{8}$)
3	95 ($\frac{33}{4}$)	70 ($\frac{27}{8}$)	12.5 ($\frac{1}{2}$)	61.5 ($\frac{21}{2}$)	50.5 (2)	22.0 ($\frac{7}{8}$)	45.0 ($\frac{113}{16}$)	33.5 ($\frac{13}{8}$)	17.0 ($\frac{11}{16}$)	50.5 (2)	19.5 ($\frac{25}{32}$)	40.5 ($\frac{15}{8}$)
4, 17 (D2)	80 ($\frac{31}{4}$)	60 ($\frac{23}{8}$)	12.0 ($\frac{1}{2}$)	51.0 ($\frac{21}{8}$)	41.0 ($\frac{15}{8}$)	18.5 ($\frac{3}{4}$)	38.0 ($\frac{11}{2}$)	28.0 ($\frac{11}{8}$)	14.0 ($\frac{9}{16}$)	42.5 ($\frac{111}{16}$)	16.0 ($\frac{21}{32}$)	34.0 ($\frac{13}{8}$)
5	70 ($\frac{27}{8}$)	53 ($\frac{21}{8}$)	9.5 ($\frac{3}{8}$)	45.5 ($\frac{113}{16}$)	37.0 ($\frac{11}{2}$)	16.0 ($\frac{21}{32}$)	34.5 ($\frac{13}{8}$)	25.5 ($\frac{11}{16}$)	11.5 ($\frac{15}{32}$)	38.0 ($\frac{11}{2}$)	13.5 ($\frac{9}{16}$)	31.0 ($\frac{11}{4}$)
6	70 ($\frac{27}{8}$)	50 (2)	9.5 ($\frac{3}{8}$)	45.5 ($\frac{113}{16}$)	37.0 ($\frac{11}{2}$)	16.0 ($\frac{21}{32}$)	34.5 ($\frac{13}{8}$)	25.5 ($\frac{11}{16}$)	11.5 ($\frac{15}{32}$)	38.0 ($\frac{11}{2}$)	13.5 ($\frac{9}{16}$)	31.0 ($\frac{11}{4}$)
7, 18 (D2)	60 ($\frac{23}{8}$)	40 ($\frac{15}{8}$)	7.0 ($\frac{9}{32}$)	40.5 ($\frac{15}{8}$)	33.0 ($\frac{15}{16}$)	13.0 ($\frac{17}{32}$)	30.5 ($\frac{11}{4}$)	23.0 ($\frac{29}{32}$)	9.0 ($\frac{3}{8}$)	34.0 ($\frac{13}{8}$)	11.0 ($\frac{7}{16}$)	27.0 ($\frac{11}{8}$)
8	54 ($\frac{27}{4}$)	54 ($\frac{21}{4}$)	1.5 ($\frac{1}{16}$)	45.5 ($\frac{113}{16}$)	37.0 ($\frac{11}{2}$)	7.5 ($\frac{5}{16}$)	34.5 ($\frac{13}{8}$)	25.5 ($\frac{11}{16}$)	3.5 ($\frac{5}{32}$)	38.0 ($\frac{11}{2}$)	5.5 ($\frac{7}{32}$)	31.0 ($\frac{11}{4}$)
9	50 (2)	48.5 ($\frac{15}{16}$)	2.5 ($\frac{1}{8}$)	40.5 ($\frac{13}{8}$)	33.0 ($\frac{13}{16}$)	8.0 ($\frac{11}{32}$)	30.5 ($\frac{11}{4}$)	23.0 ($\frac{29}{32}$)	4.0 ($\frac{3}{16}$)	34.0 ($\frac{13}{8}$)	6.0 ($\frac{1}{4}$)	27.0 ($\frac{11}{8}$)
10, 19 (D3)	47 ($\frac{17}{8}$)	37 ($\frac{11}{2}$)	5.0 ($\frac{7}{32}$)	33.0 ($\frac{5}{16}$)	27.0 ($\frac{11}{8}$)	9.5 ($\frac{3}{8}$)	25.0 (1)	18.5 ($\frac{3}{4}$)	6.5 ($\frac{9}{32}$)	28.0 ($\frac{11}{8}$)	8.0 ($\frac{11}{32}$)	22.0 ($\frac{7}{8}$)
11, 20 (D2)	45 ($\frac{113}{16}$)	35 ($\frac{17}{16}$)	4.0 ($\frac{3}{16}$)	33.0 ($\frac{5}{16}$)	27.0 ($\frac{11}{8}$)	8.5 ($\frac{11}{32}$)	25.0 (1)	18.5 ($\frac{3}{4}$)	5.5 ($\frac{7}{32}$)	28.0 ($\frac{11}{8}$)	7.0 ($\frac{9}{32}$)	22.0 ($\frac{7}{8}$)
12	45 ($\frac{113}{16}$)	45 ($\frac{113}{16}$)	*			5.0 ($\frac{7}{32}$)	30.5 ($\frac{11}{4}$)	23.0 ($\frac{29}{32}$)	1.5 ($\frac{1}{16}$)	34.0 ($\frac{13}{8}$)	3.5 ($\frac{5}{32}$)	27.0 ($\frac{11}{8}$)
13	43 ($\frac{13}{4}$)	33 ($\frac{15}{16}$)	6.0 ($\frac{1}{4}$)	28.0 ($\frac{11}{8}$)	23.0 ($\frac{29}{32}$)	10.0 ($\frac{13}{32}$)	21.0 ($\frac{27}{32}$)	15.5 ($\frac{5}{8}$)	7.0 ($\frac{9}{32}$)	23.0 ($\frac{29}{32}$)	8.0 ($\frac{11}{32}$)	19.0 ($\frac{3}{4}$)
14	38 ($\frac{11}{2}$)	32 ($\frac{15}{16}$)	3.5 ($\frac{5}{32}$)	28.0 ($\frac{11}{8}$)	23.0 ($\frac{29}{32}$)	7.0 ($\frac{9}{32}$)	21.0 ($\frac{27}{32}$)	15.5 ($\frac{5}{8}$)	5.0 ($\frac{7}{32}$)	23.0 ($\frac{29}{32}$)	6.0 ($\frac{1}{4}$)	19.0 ($\frac{3}{4}$)
15	34 ($\frac{13}{8}$)	28 ($\frac{11}{8}$)	3.0 ($\frac{1}{8}$)	25.5 ($\frac{11}{16}$)	20.5 ($\frac{13}{16}$)	6.0 ($\frac{1}{4}$)	19.0 ($\frac{3}{4}$)	14.0 ($\frac{9}{16}$)	4.0 ($\frac{3}{16}$)	21.5 ($\frac{7}{8}$)	5.0 ($\frac{7}{32}$)	17.0 ($\frac{11}{16}$)
16	23 ($\frac{29}{32}$)	23 ($\frac{29}{32}$)	0.0 (0)	20.5 ($\frac{13}{16}$)	16.5 ($\frac{21}{32}$)	3.0 ($\frac{1}{8}$)	15.0 ($\frac{19}{32}$)	11.0 ($\frac{7}{16}$)	1.0 ($\frac{1}{16}$)	17.0 ($\frac{11}{16}$)	2.0 ($\frac{3}{32}$)	13.5 ($\frac{9}{16}$)

* Do not use this frame and print layout combination, as the subject's face will not fit within the print.

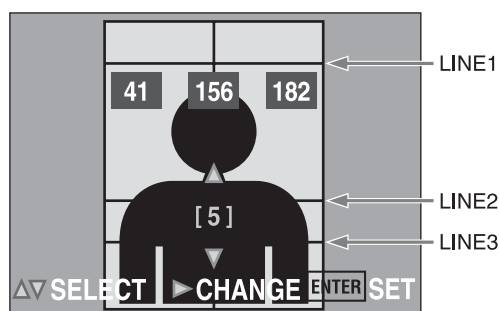


To adjust the horizontal guidelines (FRAME-[5])

The default setting for the three horizontal guideline positions of FRAME-[5] is the same as that for FRAME-[1]. You can adjust the position of the guidelines by performing the following steps.

For the dimensions of prints after adjusting the guideline positions, see “Dimensions for FRAME-[5] prints” on page 48.

- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select \square FRAME by pressing the \blacktriangle or \blacktriangledown control button.
- 3 Press the ENTER button.
The frame selection screen appears.
- 4 Select FRAME-[5] by pressing the \blacktriangle or \blacktriangledown control button.
The guidelines for FRAME-[5] appear on the LCD.



- 5 Adjust the position of the three horizontal guidelines.
LINE1 indicates the top line, LINE2 the middle line, and LINE3 the bottom line.
 - 1) Select LINE1 by pressing the \blacktriangleright control button.
 - 2) Adjust the position of LINE1 by pressing the \blacktriangle or \blacktriangledown control button.
 - 3) Select LINE2 by pressing the \blacktriangleright control button.
 - 4) Adjust the position of LINE2 by pressing the \blacktriangle or \blacktriangledown control button.
 - 5) Select LINE3 by pressing the \blacktriangleright control button.
 - 6) Adjust the position of LINE3 by pressing the \blacktriangle or \blacktriangledown control button.
 - 7) Press the ENTER button.
- 6 Press the ENTER button.
The SETUP screen reappears.

Dimensions for FRAME-[5] prints

The default values for LINE1, LINE2, and LINE3 are 41, 157, and 182, respectively. You can calculate the approximate values of (c), (d), and (e) for each print size by multiplying the LINE1, LINE2, and LINE3 values by the values in column F of the following table.

$$(c) = (\text{the default value of (c) for the corresponding size number}) + (\text{LINE1} - 41) \times F$$

$$(d) = (\text{LINE3} - \text{LINE1}) \times F$$

$$(e) = (\text{LINE2} - \text{LINE1}) \times F$$

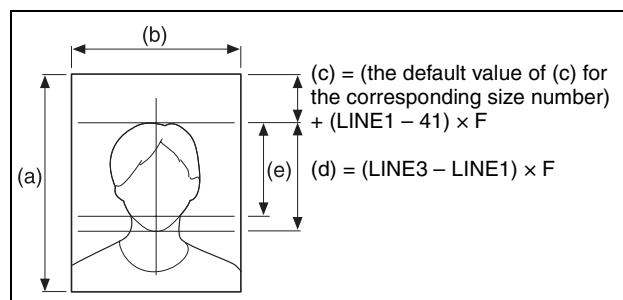
For example, when 10 is selected for the size number with LINE1 and LINE2 at 51 and 157 respectively, the approximate dimensions are as follows:

$$(c) = 5.0 + (51 - 41) \times 0.23 = 7.3 \text{ mm } (5/16")$$

$$(e) = (157 - 51) \times 0.23 = 24.4 \text{ mm } (31/32")$$

Note

The values in column F are rounded, so calculation results will not be exact. Use the calculation results as a reference, and confirm the actual dimensions after printing.




Tolerance: $\pm 3\%$

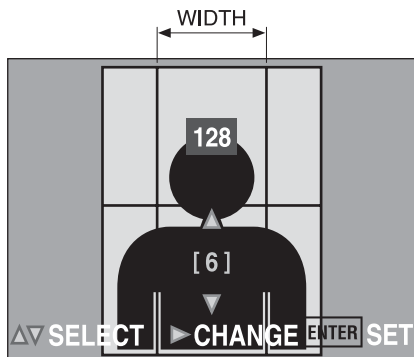
Size No.	Print size		Default values			F
	(a) mm (inches)	(b) mm (inches)	(c) mm (inches)	(d) mm (inches)	(e) mm (inches)	
1 (X46)	151 (6)	101.6 (4)	23.0 ($29/32$)	96.0 ($37/8$)	78.0 ($31/8$)	0.68
1 (X45)	120 ($43/4$)	97.5 ($37/8$)	14.5 ($19/32$)	82.0 ($31/4$)	67.0 ($23/4$)	0.58
2	120 ($43/4$)	90 ($35/8$)	16.5 ($21/32$)	78.5 ($31/8$)	64.0 ($25/8$)	0.56
3	95 ($33/4$)	70 ($27/8$)	12.5 ($1/2$)	61.5 ($21/2$)	50.5 (2)	0.44
4, 17 (D2)	80 ($31/4$)	60 ($23/8$)	12.0 ($1/2$)	51.0 ($21/8$)	41.0 ($15/8$)	0.36
5	70 ($27/8$)	53 ($21/8$)	9.5 ($3/8$)	45.5 ($113/16$)	37.0 ($11/2$)	0.32
6	70 ($27/8$)	50 (2)	9.5 ($3/8$)	45.5 ($113/16$)	37.0 ($11/2$)	0.32
7, 18 (D2)	60 ($23/8$)	40 ($15/8$)	7.0 ($9/32$)	40.5 ($15/8$)	33.0 ($15/16$)	0.29
8	54 ($21/4$)	54 ($21/4$)	1.5 ($1/16$)	45.5 ($113/16$)	37.0 ($11/2$)	0.32

Print size			Default values			F
Size No.	(a) mm (inches)	(b) mm (inches)	(c) mm (inches)	(d) mm (inches)	(e) mm (inches)	
9	50 (2)	48.5 (1 ¹⁵ / ₁₆)	2.5 (¹ / ₈)	40.5 (1 ⁵ / ₈)	33.0 (1 ⁵ / ₁₆)	0.29
10, 19 (D3)	47 (1 ⁷ / ₈)	37 (1 ¹ / ₂)	5.0 (⁷ / ₃₂)	33.0 (1 ⁵ / ₁₆)	27.0 (1 ¹ / ₈)	0.23
11, 20 (D2)	45 (1 ¹³ / ₁₆)	35 (1 ⁷ / ₁₆)	4.0 (³ / ₁₆)	33.0 (1 ⁵ / ₁₆)	27.0 (1 ¹ / ₈)	0.23
12	45 (1 ¹³ / ₁₆)	45 (1 ¹³ / ₁₆)	*			0.29
13	43 (1 ³ / ₄)	33 (1 ⁵ / ₁₆)	6.0 (¹ / ₄)	28.0 (1 ¹ / ₈)	23.0 (²⁹ / ₃₂)	0.20
14	38 (1 ¹ / ₂)	32 (1 ⁵ / ₁₆)	3.5 (⁵ / ₃₂)	28.0 (1 ¹ / ₈)	23.0 (²⁹ / ₃₂)	0.20
15	34 (1 ³ / ₈)	28 (1 ¹ / ₈)	3.0 (¹ / ₈)	25.5 (1 ¹ / ₁₆)	20.5 (¹³ / ₁₆)	0.18
16	23 (²⁹ / ₃₂)	23 (²⁹ / ₃₂)	0.0 (0)	20.5 (¹³ / ₁₆)	16.5 (²¹ / ₃₂)	0.15

* Do not use this frame and print layout combination, as the subject's face will not fit within the print.

To adjust the width of the guidelines (FRAME-[6])

- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see "Displaying the SETUP Screen" on page 30.
- 2 Select  FRAME by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The frame selection screen appears.
- 4 Select FRAME-[6] by pressing the ▲ or ▼ control button.
The guidelines for FRAME-[6] appear on the LCD.



- 5 Adjust the width of the guidelines.
 - 1) Select WIDTH by pressing the ► control button.

- 2) Adjust the width of the guidelines by pressing the ▲ or ▼ control button.
- 3) Press the ENTER button.

- 6 Press the ENTER button.
The SETUP screen reappears.

Dimensions for FRAME-[6] prints

The default value for WIDTH is 128. You can calculate the approximate value of (g) for each print size by multiplying the WIDTH value by the values in column G of the following table.

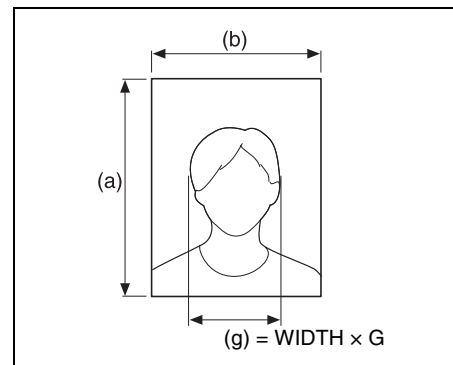
$$(g) = \text{WIDTH} \times G$$

For example, when 10 is selected for the size number with WIDTH at 128, the dimension is as follows:

$$(g) = 128 \times 0.16 = 20.48 \text{ mm (13/16")}$$

Note

The values in column G are rounded, so calculation results will not be exact. Use the calculation results as a reference, and confirm the actual dimensions after printing.




Tolerance: ±3%


Print size				G
Size No.	(a) mm (inches)	(b) mm (inches)	(g) mm (inches)	
1 (X46)	151 (6)	101.6 (4)	59.0 (2 ³ / ₈)	0.46
1 (X45)	120 (4 ³ / ₄)	97.5 (3 ⁷ / ₈)	50.0 (2)	0.39
2	120 (4 ³ / ₄)	90 (3 ³ / ₈)	48.0 (1 ¹⁵ / ₁₆)	0.38
3	95 (3 ³ / ₄)	70 (2 ⁷ / ₈)	36.5 (1 ⁷ / ₁₆)	0.29
4, 17 (D2)	80 (3 ¹ / ₄)	60 (2 ³ / ₈)	31.0 (1 ¹ / ₄)	0.24
5	70 (2 ⁷ / ₈)	53 (2 ¹ / ₈)	28.0 (1 ¹ / ₈)	0.22
6	70 (2 ⁷ / ₈)	50 (2)	28.0 (1 ¹ / ₈)	0.22

Print size			Default values	G
Size No.	(a) mm (inches)	(b) mm (inches)	(g) mm (inches)	
7, 18 (D2)	60 (2 ³ / ₈)	40 (1 ⁵ / ₈)	25.0 (1)	0.19
8	54 (2 ¹ / ₄)	54 (2 ¹ / ₄)	28.0 (1 ¹ / ₈)	0.22
9	50 (2)	48.5 (1 ¹⁵ / ₁₆)	25.0 (1)	0.19
10, 19 (D3)	47 (1 ⁷ / ₈)	37 (1 ¹ / ₂)	20.0 (¹³ / ₁₆)	0.16
11, 20 (D2)	45 (1 ¹³ / ₁₆)	35 (1 ⁷ / ₁₆)	20.0 (¹³ / ₁₆)	0.16
12	45 (1 ¹³ / ₁₆)	45 (1 ¹³ / ₁₆)	25.0 (1)	0.19
13	43 (1 ³ / ₄)	33 (1 ⁵ / ₁₆)	17.0 (¹¹ / ₁₆)	0.13
14	38 (1 ¹ / ₂)	32 (1 ³ / ₁₆)	17.0 (¹¹ / ₁₆)	0.13
15	34 (1 ³ / ₈)	28 (1 ¹ / ₈)	15.5 (⁵ / ₈)	0.12
16	23 (²⁹ / ₃₂)	23 (²⁹ / ₃₂)	12.5 (¹ / ₂)	0.1

To remove the guidelines

- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select  FRAME by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The frame selection screen appears.
- 4 Select OFF by pressing the ▲ or ▼ control button.
- 5 Press the ENTER button.
The SETUP screen reappears.

To switch the frame easily

When the image resolution is set to HIGH-ID or STD-ID, you can easily switch the frame with the ▼/ control button. (You cannot switch the frame in the PICTURE INFO screen.)

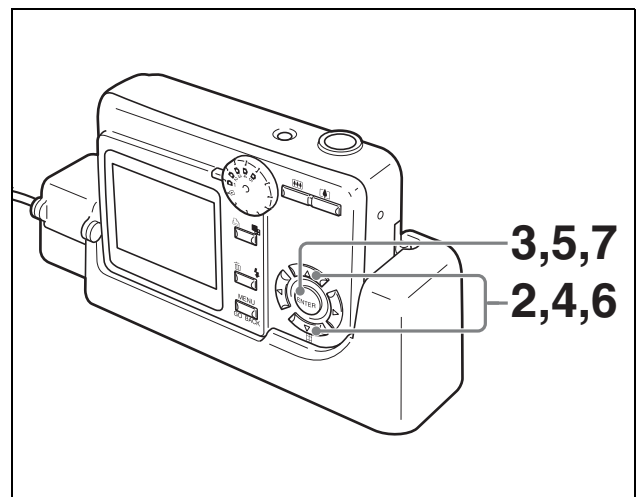
Setting the Print Size (PRINT SIZE LIST)


The print layouts available for selection on the layout preview screen can be set in the SETUP menu. Set the most frequently used layouts to display so that you can select the desired size easily.

For details on prints available for the selected layout, see “Print Layouts” on page 6.

You can select millimeters or inches as the units for size display.

For details on selecting the size unit, see “Selecting the Units for Size Display (SIZE UNIT)” on page 51.



- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select  PRINT SIZE LIST by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The PRINT SIZE LIST screen appears.
- 4 Select a size to hide by pressing the ▲ or ▼ control button.
- 5 Press the ENTER button.
The ✓ (check mark) for the selected size disappears, and the size is no longer available on the layout preview screen.
Press the ENTER button again to restore the ✓ mark and make the selected size available on the layout preview screen again.

Each press of the ENTER button removes or restores the ✓ mark.

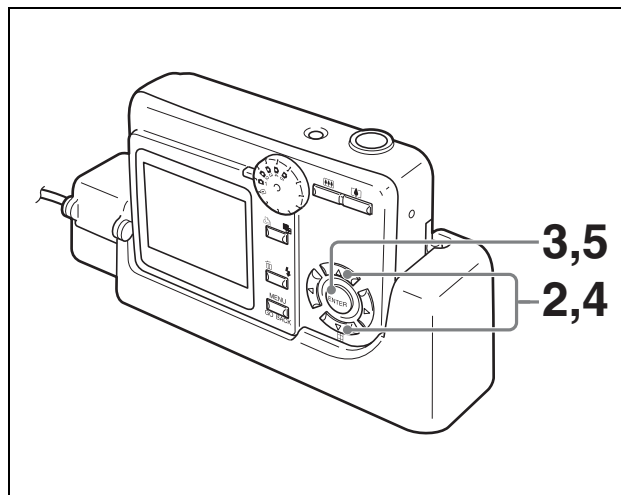
Note


You cannot remove the ✓ mark for all the print sizes.

- 6** When you have finished configuring the settings, select RETURN by pressing the ▲ or ▼ control button.
- 7** Press the ENTER button.
The SETUP screen reappears.

Selecting the Units for Size Display (SIZE UNIT)

The dimensions that appear in the layout preview screen and PRINT SIZE LIST of the SETUP menu can be displayed in either millimeters or inches.

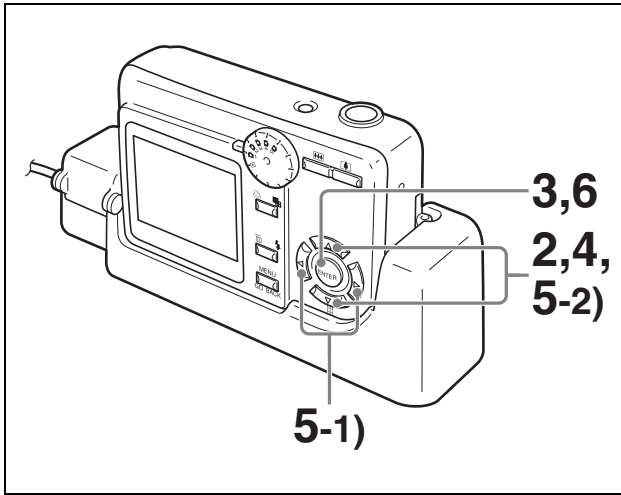



- 1** Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2** Select  SIZE UNIT by pressing the ▲ or ▼ control button.
- 3** Press the ENTER button.
The SIZE UNIT screen appears.
- 4** Select millimeters or inches by pressing the ▲ or ▼ control button.
- 5** Press the ENTER button.
The SETUP screen reappears.

Setting the Date and Time

(DATE & TIME)

The year, month, day, and time that a picture is taken can be recorded and then displayed during playback. The date and time display can also be turned off.



- 1** Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2** Select  DATE & TIME by pressing the ▲ or ▼ control button.
- 3** Press the ENTER button.
The DATE & TIME screen appears.
- 4** Select ON by pressing the ▼ control button.
- 5** Set the date and time.
 - 1)** Select an item to set by pressing the ◀ or ▶ control button.
 - 2)** Set the numeric value by pressing the ▲ or ▼ control button.
- 6** When you have finished configuring all the settings, press the ENTER button.
The specified date and time are set, and the SETUP screen reappears.

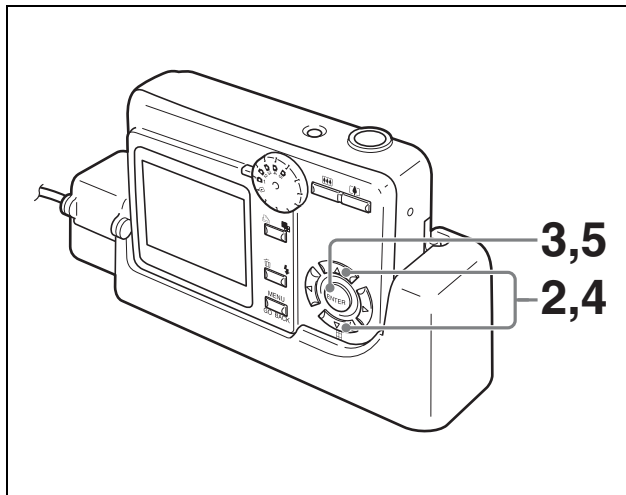
To cancel date and time setting


Press the MENU/GO BACK button.

Notes

- If this setting is OFF when a picture is taken, the date and time are not recorded.
- To display date and time during playback, this setting must be turned ON.
- If the camera batteries are removed and the power cord is disconnected, your date and time settings will remain for 15 minutes before automatically resetting.

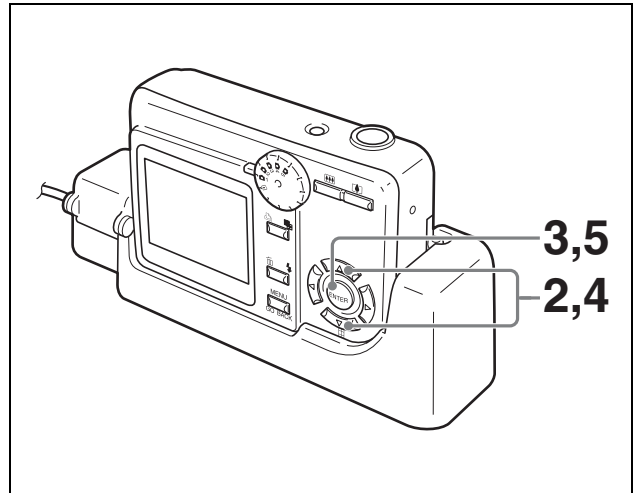
Selecting the Language Display (LANGUAGE)





- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select  LANGUAGE by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The LANGUAGE screen appears.
- 4 Select a language display by pressing the ▲ or ▼ control button.
You can select from English, German, French, Italian, Spanish, Dutch, Polish, Simplified Chinese, Traditional Chinese, Korean, Russian, and Arabic.
- 5 Press the ENTER button.
The SETUP screen reappears.

Setting Camera Sounds (CAMERA SOUND)

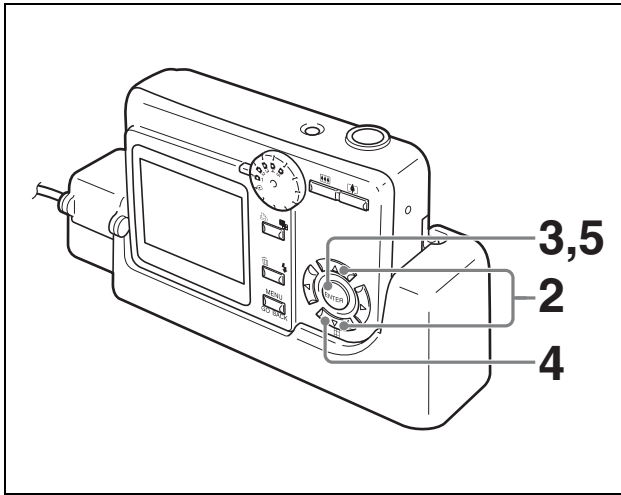
You can select whether the camera makes sounds when it is operated.



- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select  CAMERA SOUND by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The CAMERA SOUND screen appears.
- 4 Select a sound setting by pressing the ▲ or ▼ control button.
ANY ACTION: A sound is emitted for all camera operations (except zoom operations).
SHUTTER & PRINT: A sound is emitted only when the release or  button is pressed.
OFF: No sounds are emitted.
- 5 Press the ENTER button.
The SETUP screen reappears.

Formatting the Camera's Memory (**FORMAT MEMORY**)

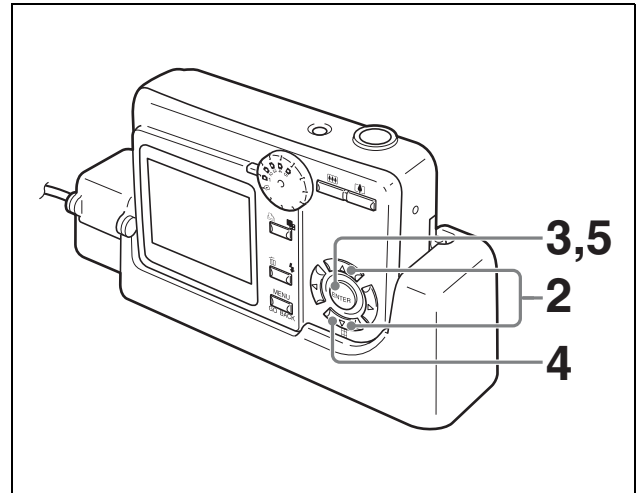
You can format the camera's memory. All pictures stored in the camera's built-in memory (including protected pictures) are deleted after formatting.



- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select **FORMAT MEMORY** by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The **FORMAT MEMORY** screen appears.
- 4 Read the warning carefully, and select “OK” by pressing the ▼ control button.
- 5 Press the ENTER button.
When the mode dial is set to **1** – **5**, the SETUP screen reappears.
When the mode dial is set to **▶**, “No image data” appears.

Returning All Settings to Defaults (**RESET SETTING**)

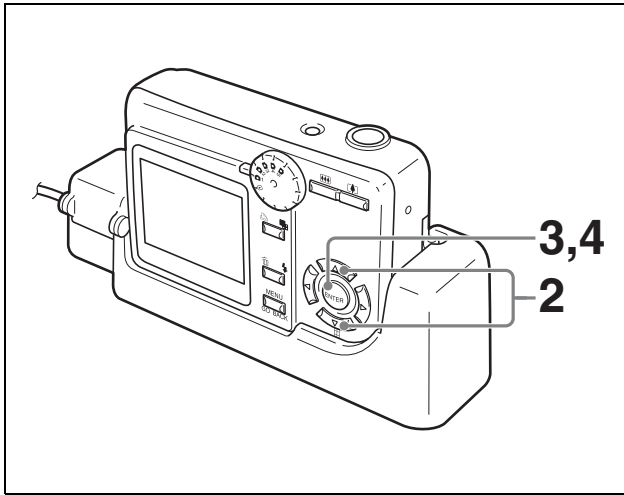
You can return all camera settings to their default factory settings.



- 1 Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2 Select **RESET SETTING** by pressing the ▲ or ▼ control button.
- 3 Press the ENTER button.
The **RESET SETTING** screen appears.
- 4 Read the warning carefully, and select “OK” by pressing the ▼ control button.
- 5 Press the ENTER button.
The **LANGUAGE** screen appears.
- 6 Select the language to display.
All camera settings are returned to their default factory settings, and the previous screen reappears.

Displaying the Firmware Version (F!VERSION)

You can display the camera's firmware version. Use this information when consulting a service representative about the camera.




- 1** Display the SETUP screen.
For details on displaying the SETUP screen, see “Displaying the SETUP Screen” on page 30.
- 2** Select F!VERSION by pressing the ▲ or ▼ control button.
- 3** Press the ENTER button.
The VERSION screen appears.
- 4** Press the ENTER button.
The Capture or Playback mode screen reappears.

Locking the Camera Menu


You can keep menu screens from displaying even when the MENU/GO BACK button is pressed during Capture or Playback mode. This can prevent accidental changes to menu settings.

To lock the menus

Press the MENU/GO BACK button for at least five seconds. The menu screen disappears, and the lock icon  appears. This icon indicates that the menus are now locked and pressing the MENU/GO BACK button will not display the menu screen.

The menus remain locked even when you switch between Capture and Playback modes or turn the power off.

To release the menu lock

Press the MENU/GO BACK button for at least five seconds. The lock icon  disappears, and the menu screen appears.

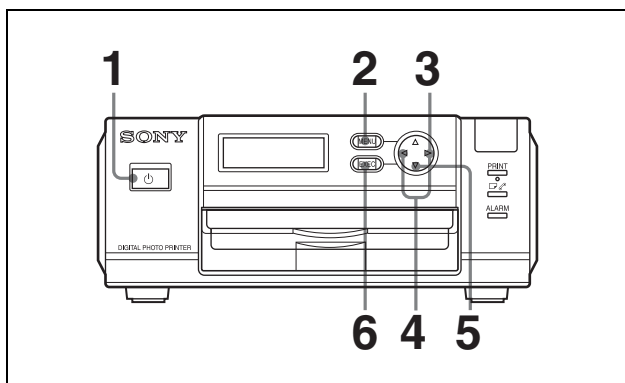
Adjusting the Printer Picture Quality

You can use the MENU function of the printer to adjust the picture quality. Up to three sets of adjustment values for color prints and black & white prints, respectively, can be saved and recalled for use later. The guide print function of the camera enables you to check the adjustment results.

For details on the meanings of the values in the CYN-RED, MAG-GRN, and YEL-BLU displays, see “Explanation of Picture Quality Adjustment Parameters” on page 57.

Adjusting the Picture Quality (COLOR ADJUST)

To adjust the picture quality of color prints



- 1 Turn on the printer.
- 2 Press the MENU button.
The COLOR ADJUST COLOR [>>] screen appears.
- 3 Press ► on the control button.
“CYN-RED” appears.
- 4 Press ◀ or ► on the control button and make adjustments.

- 5 Press ▼ on the control button.
“MAG-GRN” appears.

Repeat steps 4 and 5 to make all the necessary adjustments.

Adjustable content for each adjustment item is as follows:

CYN-RED: Pressing ◀ gives the picture more cyan, while pressing ► makes it more reddish.

MAG-GRN: Pressing ◀ gives the picture more magenta, while pressing ► makes it more greenish.

YEL-BLU: Pressing ◀ gives the picture more yellow, while pressing ► makes it more bluish.

DARK: Pressing ► increases the darkness in the dark parts.

LIGHT: Pressing ► increases the brightness in the bright parts.

SHARPNESS: Pressing ► makes the edges of objects in the picture sharper.

GAMMA: Pressing ◀ makes the color tone of the whole picture lighter, while pressing ► makes it deeper.

- 6 Press the EXEC button when adjustment is complete.
The COLOR ADJUST COLOR [>>] screen reappears.

- 7 Press the MENU button.
The READY screen reappears.

To adjust the picture quality of black & white prints

After pressing the MENU button in step 2 of “To adjust the picture quality of color prints,” press the ▼ control button. The camera enters the picture quality adjustment mode for black & white prints and the COLOR ADJUST B/W screen appears. The procedure for adjusting the picture quality is the same as that for color prints.

Saving and Loading Adjustment Values

Once picture quality adjustment is complete, you can follow the procedure below to save the adjustment values so that they can be loaded and used later.

To save adjustment values

Once adjustment is complete, save the adjustment values as follows:

- 1 In the COLOR ADJUST COLOR [>>] screen or B/W [>>] screen of the printer, press ► on the control button.
- 2 Press ▼ on the control button repeatedly until the SAVE SETTING screen appears.
- 3 Press ◀ or ▶ on the control button to select the memory-cell number (1, 2, or 3).
- 4 Press the EXEC button.
The adjustment values are saved in the memory-cell number selected in step 3.

To load adjustment values

You can load adjustment values saved in memory as follows.

- 1 In the COLOR ADJUST COLOR [>>] screen or B/W [>>] screen of the printer, press ► on the control button.
- 2 Press ▼ on the control button repeatedly until the LOAD SETTING screen appears.
- 3 Press ◀ or ▶ on the control button to select the memory-cell number (1, 2, or 3).
- 4 Press the EXEC button.
The adjustment values saved in the memory-cell number selected in step 3 are loaded.

To exit COLOR ADJUST

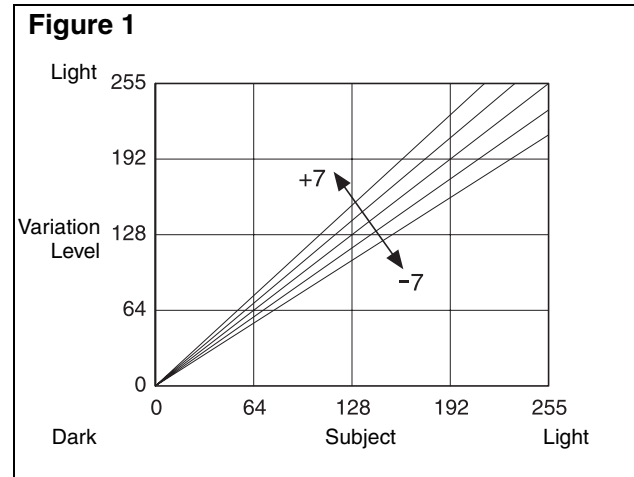
Once operations such as adjustments, saving adjustment values, and loading adjustment values are complete, press the MENU button. The READY screen reappears.

Note

If the READY screen is not retrieved, CHECK PRINTER appears on the LCD of the camera when printing is to be performed, and printing cannot be performed. When you have finished making adjustments, be sure to press the MENU button to retrieve the READY screen.

Explanation of Picture Quality Adjustment Parameters

Picture quality variations when the R, G, and B parameters are changed



CYN-RED adjustment (R parameter)

You can adjust the cyan and red color components. The default is 0.

Pressing ► on the control button of the printer changes the value in the plus direction to 1, 2 ... 7, making the red component value in the picture increase in the linear direction that the brightness increases as shown in figure 1. This adds more red as if a red light has been cast. However, the maximum effective brightness value is 255. When the value becomes larger than 255, saturation occurs. When this occurs, the saturated white area remains white even if the value is increased further in the plus direction.

Pressing ◀ on the control button changes the value in the minus direction to -1, -2 ... -7, making the red component value in the picture decrease in the linear direction that the brightness decreases as shown in the figure. Decreasing the brightness makes the red color darker and reduces the redness. The complementary color cyan (light blue) is added. In this case, the white area becomes bluish.

MAG-GRN adjustment (G parameter)

You can adjust the magenta and green color components. The default is 0.

Pressing ► on the control button of the printer changes the value in the plus direction to 1, 2 ... 7, making the green component value in the picture increase in the linear direction that the brightness increases as shown in figure 1. This adds more green as if a green light has been cast. However, the maximum effective brightness value is 255. When the value becomes larger than 255, saturation occurs. When this occurs, the saturated white area remains white even if the value is increased further in the plus direction.

Pressing ◀ on the control button changes the value in the minus direction to -1, -2 ... -7, making the green component value in the picture decrease in the linear direction that the brightness decreases as shown in the figure. Decreasing the brightness makes the green color darker and reduces the greenness. The complementary color magenta (reddish-purple) is added. In this case, the white area becomes slightly magenta in color.

YEL-BLU adjustment (B parameter)

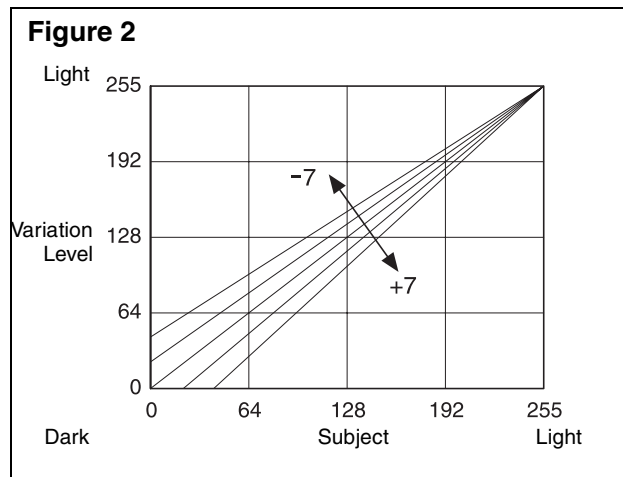
You can adjust the yellow and blue color components. The default is 0.

Except for some special specifications, this adjustment is not possible when B/W is selected.

Pressing ► on the control button of the printer changes the value in the plus direction to 1, 2 ... 7, making the blue component value in the picture increase in the linear direction that the brightness increases as shown in figure 1. This adds more blue as if a blue light has been cast. However, the maximum effective brightness value is 255. When the value becomes larger than 255, saturation occurs. When this occurs, the saturated white area remains white even if the value is increased further in the plus direction.

Pressing ◀ on the control button changes the value in the minus direction to -1, -2 ... -7, making the blue component value in the picture decrease in the linear direction that the brightness decreases as shown in the figure. Decreasing the brightness makes the blue color darker and reduces the blueness. The complementary color yellow is added. In this case, the white area becomes yellowish.

Picture quality variations when the D, L, and Gm parameters are changed



DARK adjustment (D parameter)

You can adjust the dark parts. The default is 0.

Pressing ► on the control button of the printer changes the value in the plus direction to 1, 2 ... 7, making the dark side of each of the RGB data increase simultaneously in the linear direction that the depth increases as shown in figure 2. This adds more depth. However, the maximum effective darkness value is 0. When the value becomes smaller than 0, saturation occurs.

Pressing ◀ on the control button changes the value in the minus direction to -1, -2 ... -7, making the dark side of each RGB data lighter and decreasing the darkness.

LIGHT adjustment (L parameter)

You can adjust the light parts. The default is 0.

Pressing ► on the control button of the printer simultaneously changes the R, G, and B parameters as shown in figure 1, making the light side of each of the RGB data increase simultaneously in the linear direction that the brightness increases. This gives an overexposed quality to the picture.

Pressing ◀ on the control button makes the light side of each of the RGB data darker, and gives you a picture that seems underexposed.

SHARPNESS adjustment

You can adjust the sharpness of pictures.

Pressing ► on the control button of the printer changes the value in the plus direction from 0 to 1, 2 ... 7, adding emphasis to edges in pictures. We recommend setting a small value when the print size is small.

GAMMA adjustment (GM parameter)

You can adjust the gamma value. The default is 0. Pressing ► on the control button of the printer increases the halftone of each of the RGB data in the direction that the brightness increases. Pressing ◀ on the control button decreases the halftone of each of the RGB data in the direction that the darkness increases.

SHARPNESS

SHARPNESS adjustment is a function for adding emphasis to edges in pictures. This function cannot be used to increase the resolution. It is intended for changing the sharpness.

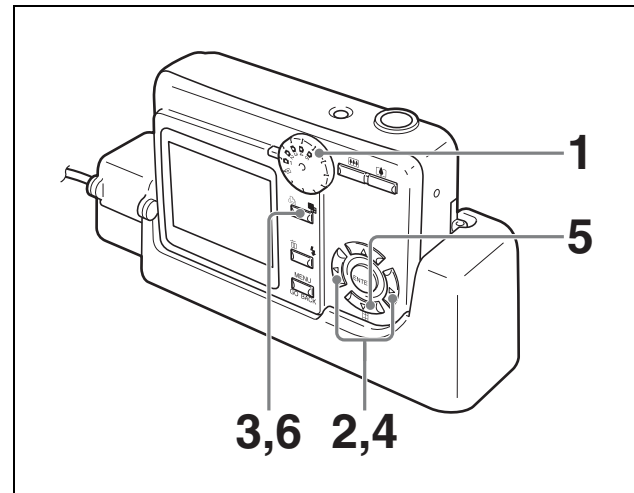
SHARPNESS can be used as a parameter to improve pictures, but increasing the sharpness too much will not produce a natural picture. Generally, the default setting is recommended. When a large print size is used and SHARPNESS is set to a large value, picture quality does appear to improve.






Contrast

In addition to the sharpness function, it is possible to add sharpness to the image by adding the contrast of dark and light. Contrast can be set using the DARK and LIGHT items in the menu screen. Increasing the DARK and LIGHT values in the plus direction increases the contrast, and a high contrast image can be obtained. The downside, however, is that increasing the contrast values in the plus direction diminishes the amount of information about white and black tones, and as a result, the white and black gradation becomes coarser. Thus, an appropriate contrast setting is required. We recommend setting the contrast to +2 or +3.

Using Guide Print to Check the Adjustment Results

You can print a guide picture to check the adjustment results.



- 1 Set the mode dial to .
- 2 Press the ◀ or ► control button and select the guide picture to print.
- 3 Press the /  button. The layout preview screen appears.
- 4 Select Guide Print-RGB or Guide Print-DLGm using the ◀ or ► control button.
- 5 Select whether to print in color or black & white by pressing the ▼ control button.
- 6 Press the /  button again. The guide picture is printed. Check the printed picture and readjust the picture quality if necessary.

For details on how to make adjustments using the printed guide picture, see “Guide Print Function” on page 60.

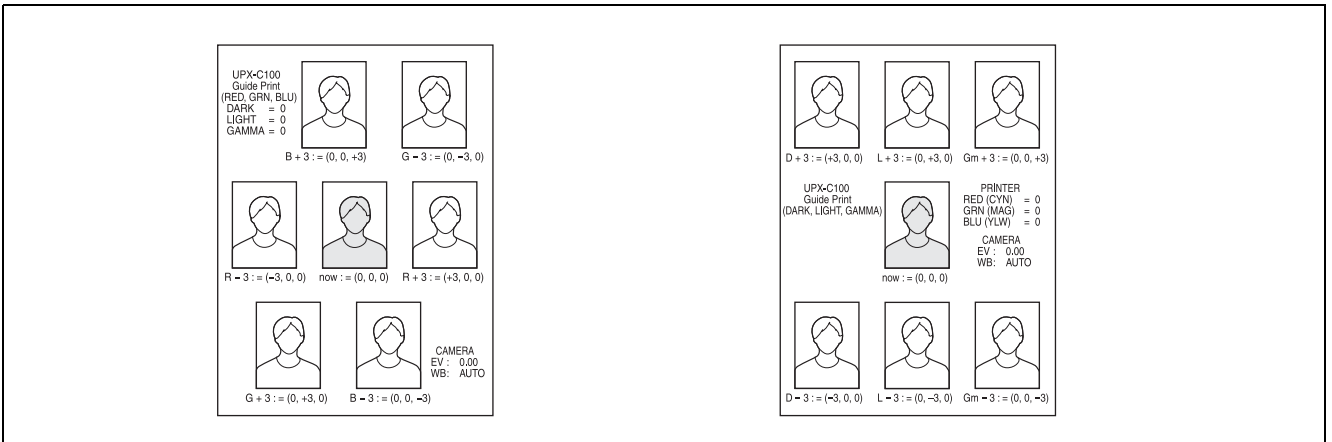
Note

The guide picture printout cannot be used to check sharpness.

Guide Print Function

Selecting the Guide Print-RGB or Guide Print-DLGm layout before printing enables you to print a guide picture that has each of the RGB or DLGm parameters changed.

Guide pictures can be printed on UPC-X46 series, UPC-X45 series, and UPC-X34 series paper. The following is an example of a guide picture printout.



Guide Print-RGB (adjusting RGB parameters)

Selecting the Guide Print-RGB layout before printing enables a guide picture (adjustment simulation) to be printed for the RGB parameters. Since the picture used for printing is the picture being played back on the camera, you can actually adjust the picture quality while

looking at the picture. The picture in the center is printed using the current color tone adjustment values. Six playback images of differing color are printed around this picture.

The current state of each of the DARK, LIGHT, and GAMMA parameters is displayed for reference.

This is a picture showing the current state of the RED, GREEN, and BLUE parameters.

This is a picture showing the RED parameter decreased by 3 from the current state. The subject appears a little darker than in the current picture, and overall the picture appears slightly cyan.

This is a picture showing the GREEN parameter increased by 3 from the current state. The white saturated parts remain white and do not change. The subject appears a little lighter than in the current picture, and slightly green.

This is a picture showing the BLUE parameter increased by 3 from the current state. The white saturated parts remain white and do not change. The subject appears a little lighter than in the current picture, and slightly blue.

This is a picture showing the GREEN parameter decreased by 3 from the current state. The subject appears a little darker than in the current picture, and overall the picture appears slightly magenta.

This is a picture showing the RED parameter increased by 3 from the current state. The white saturated parts remain white and do not change. The subject appears a little lighter than in the current picture, and slightly red.

This is a picture showing the BLUE parameter decreased by 3 from the current state. The subject appears a little darker than in the current picture, and overall the picture appears slightly yellow.

Shooting conditions of the camera

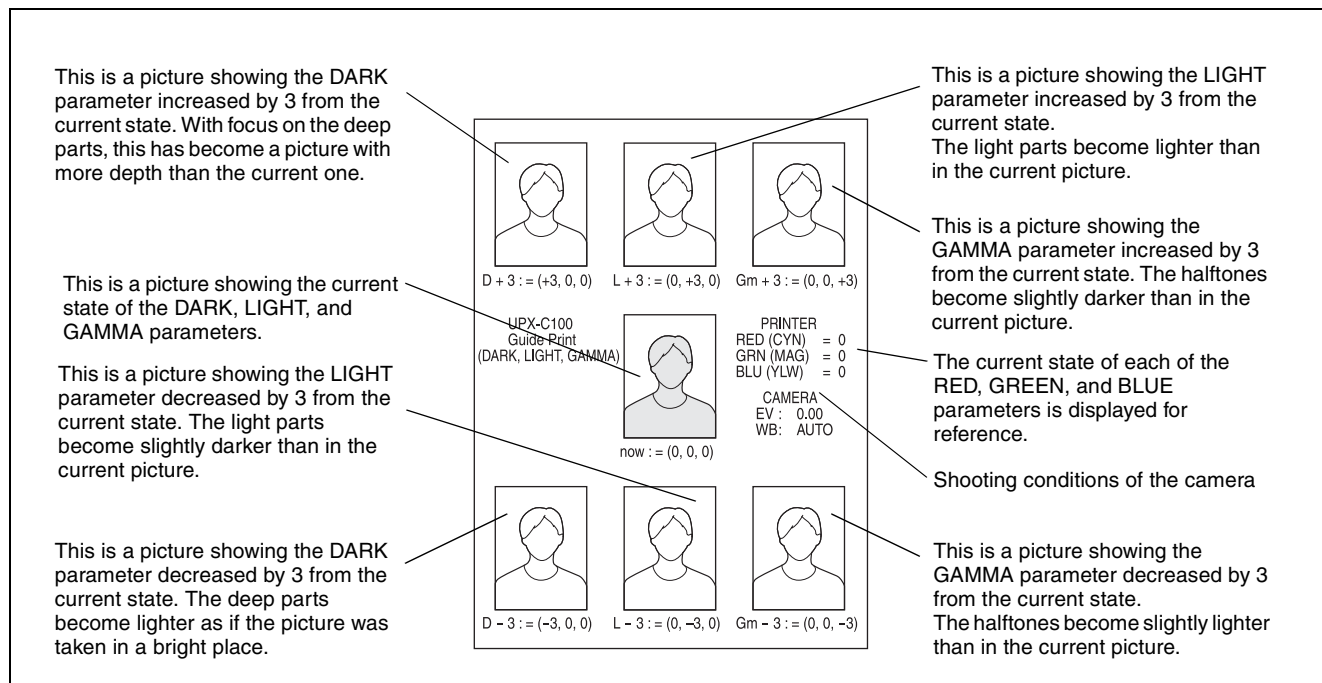
The values below each of the pictures are for the R, G, and B parameters. If, for example, you want to use the color tone on the top left in the figure above, set the B parameter to +3 because (RED, GREEN, BLUE) = (0, 0, +3).

If you want to adjust (RED, GREEN, BLUE) = (0, 0, +3) further, set the B parameter to +3, and then print another Guide Print-RGB. This will give you a simulation for each color variation with (RED, GREEN, BLUE) = (0, 0, +3) in the center.

Guide Print-DLGm (adjusting DLGm parameters)

Selecting the Guide Print-DLGm layout before printing enables a color guide to be printed for the DLGm parameters. Since the picture used for printing is the picture being played back on the camera, you can actually adjust the picture quality while looking at the picture.

The picture in the center is printed using the current color tone adjustment values. Six playback images of differing color are printed around this picture.



The values below each of the pictures are for the D, L, and Gm parameters. If, for example, you want to use the tone on the top left in the figure above, set the D parameter to +3 because (DARK, LIGHT, GAMMA) = (+3, 0, 0).

If you want to adjust (DARK, LIGHT, GAMMA) = (+3, 0, 0) further, set the D parameter to +3, and then print another Guide Print-DLGm. This will give you a simulation picture for each parameter variation with (DARK, LIGHT, GAMMA) = (+3, 0, 0) in the center.

Advice on adjusting color tones

The guide print function gives you a rough guide as to how to adjust the color tone. However, if you understand the following, you can use this function to its full potential.

The guide print can also be used for black & white prints. Black & white pictures printed with this system are printed by overlaying the three colors cyan, magenta, and yellow to express gray. Therefore, a perfectly achromatic picture may not be obtained and colors may sometimes be visible. A black & white guide print can be used to adjust the balance of these three colors.

Complementary colors

Pictures are made up of the data of three colors (R data, G data, and B data). The color tone adjustment function can be used to change the balance of these three colors. When the R parameter is changed, the CYN-RED (cyan and red) indication appears on the LCD. Similarly, the MAG-GRN (magenta and green) indication appear on the LCD when the G parameter is changed, and the YEL-BLU (yellow and blue) indication appear on the LCD when the B parameter is changed.

The complementary colors cyan and red, magenta and green, and yellow and blue are related. For example, increasing red makes cyan lighter and decreasing red makes cyan deeper.

Difference between selecting + and –

When you print a Guide Print-RGB with each of the RGB parameters for the center picture set to 0, two simulation pictures for each RGB parameter (with the respective parameter set to +3 and –3 and the remaining two parameters set to 0) are printed around the center picture. The following explains the meaning of the + and – symbols.

The R data, G data, and B data that make up the picture data are digitized values representing the strength of light of each color. The + setting is for strengthening the light of the corresponding color. The – setting is for weakening the light of the corresponding color. Data (light) saturation can be obtained with the + setting. When you need a white background, this feature enables you to get the desired results without changing the white.

• Setting in the + direction

When the R parameter is set to +3, for example, the light of the red component is strengthened, giving the overall picture a tinge of red. Since the amount of light also increases at the same time, the brightness of the picture increases by the corresponding amount.

However, some parts of the picture do not change no matter how much the light is strengthened. These include parts of the picture with absolutely no light components (such as pure green, cyan, and blue parts, their intermediate colors, and deep black parts), and parts of the picture with saturated light components (such as pure magenta, red, and yellow parts, their intermediate colors, and bright white parts).

• Setting in the – direction

When the R parameter is set to –3, for example, the light of the red component is weakened, giving the overall picture a tinge of cyan (the complementary color of red). Since the amount of light also decreases at the same time, the darkness of the picture increases by the corresponding amount.

This setting differs from the + setting in that a tinge of cyan is added to parts in which light components are saturated such as parts of pure reddish-purple (magenta), red, and yellow or their intermediate colors and bright white. This occurs especially in cases where the background is white or the subject is wearing white clothes.

Specific example 1: Removing yellow

To remove yellow from the subject, we recommend setting the B parameter to a + value in the Guide Print-RGB.

Specific example 2: Adding yellow


To add yellow to the subject, we recommend setting the B parameter to a – value in the Guide Print-RGB. However, you need to understand that the concept of weakening the light involves adding a tinge of yellow to

white parts. To avoid this, set a plus value for the L parameter that is equivalent to the minus value set for B parameter. This has the same effect as setting plus values for the R and G parameters without changing the B parameter. The point to note here is that the overall brightness increases.

Printing Times

Print times differ depending on the print size and paper size used.

Printing times

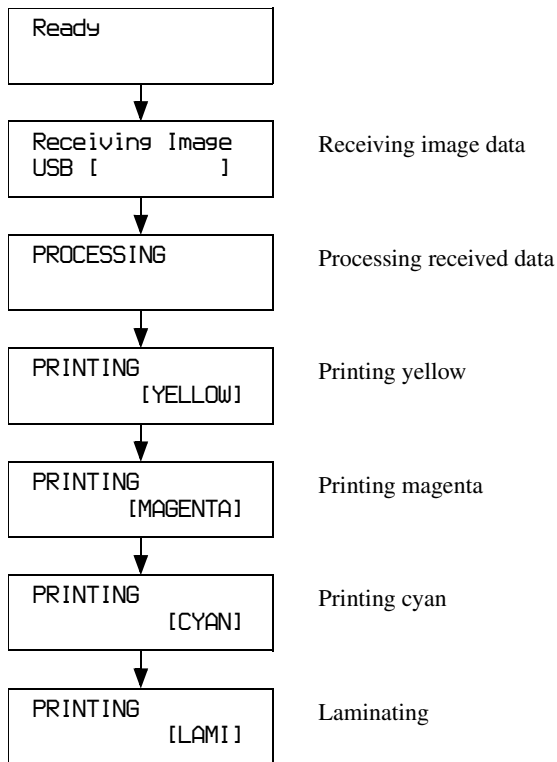
The following are examples of the approximate time it takes from the moment the  button is pressed on the camera to the moment the printer receives the picture data from the camera and prints one picture.

Print paper	Resolution	Print size 1 (151 × 101.6 mm, 6 × 4")*	Print size 4 (80 × 60 mm, 3-1/4 × 2-3/8")	Print size 10 (47 × 37 mm, 1-7/8 × 1-1/2")
UPC-X34 series	STD-ID	Not available	Approx. 80 sec	Approx. 75 sec
	HIGH-ID	Not available	Approx. 82 sec	Approx. 76 sec
UPC-X45 series	STD-ID	Approx. 180 sec	Approx. 105 sec	Approx. 101 sec
	HIGH-ID	Approx. 181 sec	Approx. 105 sec	Approx. 102 sec
UPC-X46 series	STD-ID	Approx. 138 sec	Approx. 120 sec	Approx. 120 sec
	HIGH-ID	Approx. 141 sec	Approx. 122 sec	Approx. 116 sec

* With the UPC-X45 series, print size changes to 120 × 97.5 mm (4-3/4 × 3-7/8").

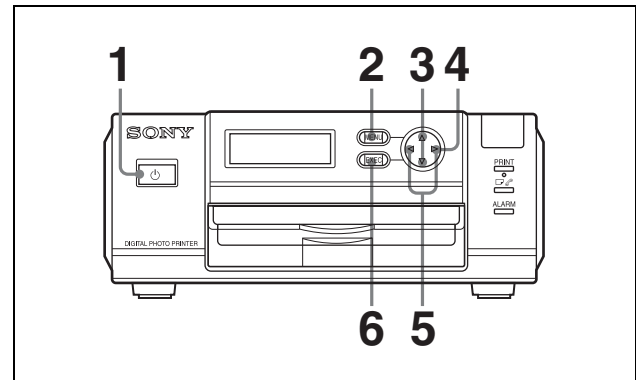
Display during printing process

When you print a picture, the operation that is being processed appears on the printer operation display as shown below.



Adjusting the Print Position (PRINT OFFSET)

When using the UPC-X46 series, you can adjust the print position in increments of 0.5 mm (1/32") so that the printed picture is correctly positioned on the print paper.



- 1 Turn on the printer.
- 2 Press the MENU button.
- 3 Press ▲ or ▼ on the control button to display “PRINT SETTING [>>]” on the operation display.
- 4 Press ► on the control button. The PRINT OFFSET screen appears.
- 5 Select an offset value by pressing ◀ or ▶ on the control button.
- 6 Press the EXEC button. The offset value selected in step 5 is confirmed, and the PRINT SETTING screen reappears.

Print a picture and check that the picture is printed in the correct position on the print paper. If further adjustment is needed, repeat the above steps.

For details on printing a picture, see “Printing the Last Picture Taken (From the Auto-Review Display)” on page 22.

To exit PRINT SETTING

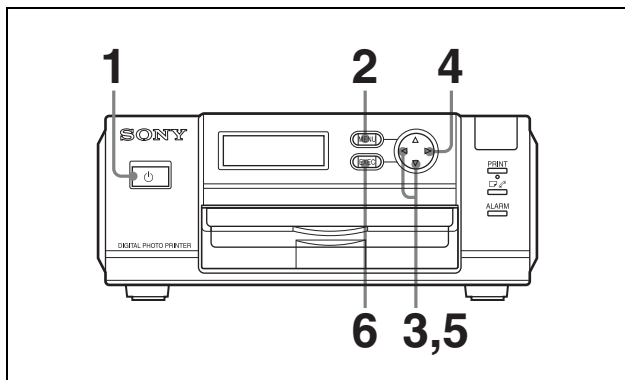
Press the MENU button to return to the READY screen.

Note

When you have finished making adjustments, be sure to press the MENU button to return to the READY screen. If you do not return to the READY screen, CHECK PRINTER will appear on the LCD of the camera the next time printing is performed, and printing will fail.

Printing a Color Pattern (PRINT TEST)

Perform the following steps to print a color pattern.



- 1 Turn on the printer.
- 2 Press the MENU button.
- 3 Press ▲ or ▼ on the control button to display “PRINT SETTING [>>]” on the operation display.
- 4 Press ► on the control button. The PRINT OFFSET screen appears.
- 5 Press ▲ or ▼ on the control button to display the PRINT TEST screen.
- 6 Press the EXEC button. A color pattern is printed.

Note

When you have finished making adjustments, be sure to press the MENU button to return to the READY screen. If you do not return to the READY screen, CHECK PRINTER will appear on the LCD of the camera the next time printing is performed, and printing will fail.

Camera Status Indicators

Standby Lamp

Lit Green

→ The camera is operating normally.

Flashing Green

→ The AUTO ERASE mode is turned ON, and the camera's built-in memory is full. When new pictures are taken, images in memory are automatically deleted, starting with the oldest.

Lit Orange

→ The AUTO ERASE mode is turned OFF, and the camera's built-in memory is full. To take more pictures, you must delete some old images or turn ON the AUTO ERASE mode.

Flashing Orange

→ The camera is currently:
Storing image data in memory,
Charging the built-in flash, or
Displaying an error message.

Lit Red

→ There is a problem with the camera. Contact your nearest Sony dealer.



Flashing Red

→ The batteries are dead. Replace the batteries or connect the power cord.


Power Status Indicators

When using batteries

When the battery charge is getting low, the following icons appear at the bottom right of the camera's LCD. Use these to get a general idea of when to replace the batteries.

Indicator	Power status
	The battery charge is getting low. Ready fresh batteries or the AC power adaptor.
 (Flashing)	The batteries are fully discharged. No pictures can be taken. Replace the batteries, or use the AC power adaptor.

When using an AC power supply

The  icon appears at the bottom right of the camera's LCD.

Power Save Mode

When the camera is on and no operation is performed for a set period of time, the camera automatically enters power save mode.

When using batteries

The LCD is turned off after one minute of inactivity. The lens is stored and the power is turned off after five minutes of inactivity.

When using an AC power supply

The lens is stored after three minutes of inactivity. The power is turned off after ten minutes of inactivity.

Maintaining System Performance

To maintain system performance, be sure to read the following.

Camera

Locations of use and storage

Using or storing the camera in any of the following locations may result in a malfunction. Do not use or store the camera in such locations.

- Extremely hot or cold locations (operating temperature of 5 °C to 40 °C (41 °F to 104 °F))
- Locations subject to prolonged periods of direct sunlight or near heating appliances
- Locations with excessive humidity or dust
- Locations exposed to rain
- Locations exposed to severe vibration
- Near sources of strong magnetism
- Near sources of strong electromagnetic waves such as TV or radio transmitters

Heat dissipation

Do not cover the camera (such as with a cloth). Doing so will increase the internal temperature and may result in a malfunction.

Transportation

When transporting the camera, be sure to pack it in the supplied carton and cushioning or equivalent packaging, and make sure it is not subject to severe mechanical shocks.

Taking test pictures

Be sure to take test pictures beforehand to ensure that pictures can be taken normally.

Lens

- Be careful not to bump into or press against the lens while shooting.
Also, do not touch the lens surface.
- If the lens does not retract into the camera housing when the power is turned off, attach the AC adapter and turn the power on and then off again.
- Never push or pull on the lens, because it may damage the lens or other camera components.

Printer

Precautions

- If you do not intend to use the printer for a long time, set the printer to standby mode and disconnect the power cord from the outlet.
- When transporting the printer, remove any accessories. Failing to do so may result in a malfunction.

Condensation

If the printer is moved from a location with low humidity to a warm location or placed in a room with a heater that causes steam and moisture to be generated, drops of water may form inside the printer. This phenomenon is referred to as condensation. If used in such a state, the printer will not work properly and may even malfunction. If there is a likelihood of condensation, turn off the power and leave the printer to stand for a while.

Cleaning

- Be sure to turn off the power and remove the power plug prior to cleaning.
- Use a blower to remove dirt and dust from the surface of the camera lens.
- Use a soft, dry cloth to gently wipe off dirt from the exterior. If the exterior is extremely dirty, use a cloth lightly moistened with a mild detergent solution to wipe off the dirt and then use a dry cloth.
- Do not use volatile substances such as alcohol, benzine, thinner, or insecticide because doing so may damage the finish and erase the indications.

Specifications

Camera

General

Power supply	AA alkaline batteries, AA nickel-hydride batteries, or AC power adaptor (5.0 V DC)
Input current	1.5 A max. (when using an AC power adaptor)
Operating temperature	5 °C to 40 °C (41 °F to 104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	20% to 80% (no condensation)
Dimensions (W/H/D)	97 × 64 × 32 mm (3-7/8 × 2-5/8 × 1-5/16")
Weight:	Approx. 134 g (4.73 oz)

System

Camera type	Digital still camera
Recording/playback system	Frame digital
Data compression/decompression system	JPEG baseline system
Recording media	Built-in 16 MB flash memory
Picture elements	1/2.5 inch 5M CCD solid-state image sensor
Recording resolution	FULL: 2576 × 1932 pixels HIGH: 1280 × 960 pixels STD: 832 × 624 pixels HIGH-ID: 1280 × 960 pixels STD-ID: 832 × 624 pixels
Recording capacity	FULL: Approx. 10 pictures can be taken HIGH: Approx. 40 pictures can be taken STD: Approx. 73 pictures can be taken HIGH-ID: Approx. 40 pictures can be taken STD-ID: Approx. 73 pictures can be taken
Delete method	One picture delete, all picture delete
White balance	AUTO, OnePush, 3000 K to 7000 K (500 K steps)
Photometric system	Center weighted
Exposure control type	Aperture priority, shutter variable program exposure control/built-in flash intensity control

Shutter speed	1/2 to 1/1000 seconds
Sensitivity	AUTO, ISO 80, ISO 100, ISO 140, ISO 200, ISO 280, ISO 400
LCD monitor	2.0-inch low-temperature polysilicon TFT color LCD Approx. 110,000 pixels
Lens	f = 5.7 to 17.1 mm (1/4 to 11/16"), 3× (equivalent to a 35- to 105-mm lens for a 35-mm film camera), auto focus F value: F2.8 (at W) to F4.8 (at T)

Input/output connectors

Interface	Printer port
DC IN 5.0 V connector	5.0 V DC

Printer

Power supply	100 to 240 V AC, 50/60 Hz
Input current	1.1 A max. (when printing)
Operating temperature	5 °C to 35 °C (41 °F to 95 °F)
Storage/transport temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Operating humidity	20% to 80% (no condensation)
Dimensions (W/H/D)	Approx. 203 × 85 × 305 mm (8 × 3-3/8 × 12-1/8")
Weight	Approx. 2.7 kg (5 lb 15.24 oz) (main unit only)
Printing method	Dye-sublimation thermal transfer printing (yellow, magenta, cyan, laminate)
Print resolution	403 × 403 dpi
Thermal head	403 dots/inch
Print gradation	8 bit processing for each color (yellow, magenta, and cyan)
Printing time	UPC-X46 series: Approx. 100 sec./sheet UPC-X45 series: Approx. 90 sec./sheet UPC-X34 series: Approx. 65 sec./sheet
Paper supply method	Autofeed from paper tray
Maximum capacity of paper tray	UPC-X46 series: 25 sheets UPC-X45 series: 25 sheets UPC-X34 series: 30 sheets
Paper eject method	Front ejection (above paper tray)
Input	AC IN (power inlet)

Maximum print size

	UPC-X46 series: 101.6 × 151.4 mm (4 × 6") (no border)
	UPC-X45 series: 97.8 × 120.0 mm (3-7/8 × 4-3/4") (with border)
	UPC-X34 series: 70.1 × 95.3 mm (2-7/8 × 3-7/8") (with border)
Print pixels	UPC-X46 series: 1664 × 2440 dots UPC-X45 series: 1552 × 1904 dots UPC-X34 series: 1112 × 1512 dots

Interface USB

Pin assignment of the USB connector

I/O	Signal	Function
	Vcc	Cable power, maximum current: 100 mA
I/O	-Data	Data
I/O	+Data	Data, pulled up to +3.3 V via a 1.5 kohm resistor
	GROUND	Cable ground

AC power adaptor

Power supply	100 to 240 V AC, 50/60 Hz
Input current	0.26 A
Output	5.0 V DC, 2.0 A in operating mode
Operating temperature	5 °C to 35 °C (41 °F to 95 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Dimensions (W/H/D)	Approx. 69 × 26 × 50 mm (2-3/4 × 1-1/16 × 2") (including protrusions)
Weight	Approx. 170 g (6.0 oz)

Supplied accessories

Paper tray for the UPC-X46 series (1)
Paper tray for the UPC-X34 series (1)
Tray cover (1)
Camera grip (1)
Printer connection cable (1)
1-833-680-11 (Sony),
1-833-680-12 (Sony), or
1-833-680-21 (Sony)
UPA-AC05 AC power adapter (1)
USB cable 1-824-211-41 (Sony) (1)
Size AA alkaline batteries (2)
Cleaning cassette (1)
CD-ROM (1)
Warranty card (1)
Before Using this Unit (1)
Quick Reference Guide (1)

Optional accessories

UPA-DX100TR Paper Tray

10UPC-X46 Series Self-laminating Color Printing Pack
(250 sheets)

10UPC-X45 Series Self-laminating Color Printing Pack
(250 sheets)


10UPC-X34 Series Self-laminating Color Printing Pack
(300 sheets)

Design and specifications are subject to change without notice.













Troubleshooting

Check the following items prior to submitting the equipment for repair. If the problem persists, contact your nearest Sony dealer.

Camera

Symptom	Cause/Solution
The power does not turn off even if the  button is pressed.	<ul style="list-style-type: none">The camera's internal processing is taking a long time. → Wait a while. If the power still does not turn off, disconnect the power cord or remove the batteries.
The standby lamp is lit orange or red, and the camera does not operate.	<ul style="list-style-type: none">→ See "Standby Lamp" under "Camera Status Indicators" on page 64.



While Taking Pictures

Symptom	Cause/Solution
A picture is not taken when the release button is pressed.	<ul style="list-style-type: none">The mode dial is not set to  1 –  5. → Set the mode dial to  1 –  5.Image data storage is in progress or the flash is charging (the standby lamp is flashing orange). → Wait until the standby lamp lights or flashes green.The memory is full (the standby lamp is lit orange). → Check the indication for the remaining number of pictures that can be taken. If it is zero, erase any pictures that are not needed. → Set AUTO ERASE to ON.
The flash does not fire.	<ul style="list-style-type: none">Flash Mode is not set appropriately. → Set EXPOSURE & FLASH in the menu to  A4,  F,  S&L,  M4, or  M7 –  M1.The external flash is not lighting properly. → Set EXPOSURE & FLASH to  M7 –  M1.The batteries are dead. → Replace the batteries with new ones.The life of the flash is used up. → Contact your nearest Sony dealer.


Camera LCD

Symptom	Cause/Solution
If the camera is used in a cold location, residual images may appear on the LCD. Black spots may appear or red, blue, green, or other color spots may remain on the LCD.	<ul style="list-style-type: none"> This is a normal phenomenon associated with LCDs. → This is not a malfunction.
A printer icon appears in the center of the LCD, and the camera does not operate.	<ul style="list-style-type: none"> The printer is printing a picture. → Wait until printing finishes and perform the operation again.
The display image freezes for a while after data transmission ends.	<ul style="list-style-type: none"> Paper is being fed to the printer. → The display image will change when the paper finishes feeding and printing begins.



Playback

Symptom	Cause/Solution
The DELETE screen does not appear, even if the  button is pressed.	<ul style="list-style-type: none"> The PICTURE INFO screen is displayed in Playback mode. → Press the MENU/GO BACK button to return to the MENU screen for Playback mode.
The display does not zoom in, even if the zoom lever is pressed toward  .	

Printing

Symptom	Cause/Solution
Pictures do not print, even if the  button is pressed.	<ul style="list-style-type: none"> The camera is set to Capture mode. → Pictures can only be printed from auto-review display or Playback mode. The PICTURE INFO screen is displayed in Playback mode. → Press the MENU/GO BACK button to return to the MENU screen for Playback mode.

Picture Quality

Symptom	Cause/Solution
The picture is blurred.	<ul style="list-style-type: none"> The picture is out of focus. → Check the distance between the lens and the subject, and make sure the subject is within the focus range. The camera was moved when the release button was pressed. → Hold the camera correctly and press the release button slowly. The shutter speed was too slow because EXPOSURE & FLASH is set to  or . → Set the appropriate shooting conditions. (See "Setting the Shooting Conditions" on page 38) The lens is dirty. → Clean the lens with a clean, soft, dry cloth.
The picture is too dark.	<ul style="list-style-type: none"> Something (such as a finger) was blocking the flash. → Hold the camera correctly and make sure nothing is blocking the flash. The subject was too far away. → Make sure the subject is within flash range when taking the picture. → Compensate the exposure. The subject was backlit. → Use the flash.
The colors in a picture taken indoors are not correct.	<ul style="list-style-type: none"> The lighting is affecting the colors. → Set the white balance correctly. (See "Adjusting the White Balance (WHITE BALANCE)" on page 44)
Part of the picture is missing.	<ul style="list-style-type: none"> Something (such as a finger) was blocking the lens. → Hold the camera correctly and make sure nothing is blocking the lens.
The area around the subject is dark.	<ul style="list-style-type: none"> The built-in flash was used with FULL/HIGH/STD. → Take the picture with HIGH-ID/STD-ID.


Printer

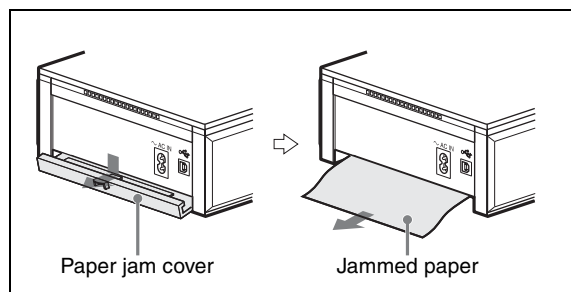
Symptom	Cause/Solution
Cannot turn on the printer.	<ul style="list-style-type: none"> The power cord is not connected properly. <ul style="list-style-type: none"> → Connect the power cord to an AC outlet properly.
Cannot print.	<ul style="list-style-type: none"> The print paper and print cartridge do not match. <ul style="list-style-type: none"> → Use a correct combination of print paper and print cartridge designed for the printer. “Waiting” is displayed on the operation display because the internal temperature of the printer is too high. <ul style="list-style-type: none"> → If the internal temperature of the printer becomes too high, printing is temporarily disabled. Wait until printing resumes automatically. The print paper is jammed. <ul style="list-style-type: none"> → Remove the jammed paper and try again. (See “To remove jammed paper” on page 70)
Cannot remove the print cartridge.	<ul style="list-style-type: none"> → The print cartridge cannot be removed while printing. Wait until printing is finished. If the print cartridge still cannot be removed, contact your nearest Sony dealer.
White lines or marks appear on printed pictures.	<ul style="list-style-type: none"> There may be dust on the thermal head. <ul style="list-style-type: none"> → Use the supplied cleaning cassette to clean the thermal head. (See “To clean the inside of the printer” on page 71) The roller inside the printer may be marking the print paper. <ul style="list-style-type: none"> → Try reducing the number of sheets in the paper tray.
The printer makes short beeping sounds and does not perform an operation.	<ul style="list-style-type: none"> → The printer makes short beeping sounds when requested to perform an operation that is not possible.
The ALARM lamp lights or flashes and an error message appears.	<ul style="list-style-type: none"> → Follow the on-screen instructions.

To remove jammed paper

If a paper jam occurs while printing is in progress, the ALARM lamp lights, an error message appears, and printing stops.

Perform the following steps to remove the jammed paper.

- 1 Press the  button on the printer to switch to standby mode.
- 2 Remove the paper tray, and then remove any jammed paper.
- 3 Remove the paper jam cover on the rear panel, and check that there is no jammed paper. If there is any jammed paper, remove it.



- 4 Reattach the cover.
- 5 Insert the paper tray.
- 6 Turn on the printer.

Note

If you are unable to remove the jammed paper, contact your nearest Sony dealer.

To clean the inside of the printer

If white lines or dots appear on printed pictures, clean the inside of the printer using the supplied cleaning cassette and the protective sheet included with the printing pack.

Notes

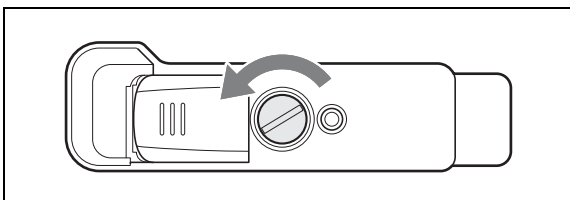
- Only perform cleaning if there are white lines or dots on the printed pictures.
- When the printer is printing pictures normally, cleaning will not improve print quality.

- 1** Remove the paper tray from the printer, and then remove the paper from the tray.
- 2** Place the protective sheet in the tray so that the unprinted side is facing up and the arrows on the bottom of the tray and back of the sheet are pointing in the same direction.
- 3** Open the print cartridge cover and remove the print cartridge.
- 4** Insert the supplied cleaning cassette and close the cover.
- 5** Press the EXEC button.
A buzzer sounds and “HEAD CLEANING/PUSH [EXEC]” appears.
- 6** Press the EXEC button again.
The cleaning cassette and protective sheet clean the inside of the printer. After cleaning is finished, the protective sheet is automatically ejected.
- 7** Remove the cleaning cassette from the printer, and reinsert the print cartridge and paper tray.

To replace the printer connection cable

The camera grip must be removed from the camera before the printer connection cable can be disconnected from the camera.

- 1** Open the cap on the camera grip, loosen the screw on the bottom by turning it counterclockwise, and then remove the grip.



- 2** Replace the printer connection cable.

Error Messages

Camera	Printer	Cause/Solution
SET MEDIA	SET NEW RIBBON PUSH [EXEC]	<ul style="list-style-type: none"> The print cartridge is not installed properly. →Install the print cartridge properly, and press the EXEC button. The print cartridge has run out. →Replace the print cartridge, and press the EXEC button.
	SET PAPER PUSH [EXEC]	<ul style="list-style-type: none"> The paper tray is not installed. →Install the paper tray, and press the EXEC button. The print paper has run out. →Insert print paper, and press the EXEC button.
	MEDIA MISMATCH PUSH [EXEC]	<ul style="list-style-type: none"> The print paper and print cartridge do not match. →Insert the correct print paper and press the EXEC button.
CHECK PRINTER	PAPER JAMMING REMOVE PRINTS	<ul style="list-style-type: none"> There is a print paper jam. →Remove the jammed paper, and try printing again. (See “To remove jammed paper” on page 70)
	REMOVE PRINTS PUSH [EXEC]	<ul style="list-style-type: none"> Print paper remains in the ejection slot. →Remove the paper tray, remove the print paper, and then press the EXEC button.
	PRINTER ERROR SERVICE CALL	<ul style="list-style-type: none"> There is a problem with the printer. →Contact your nearest Sony dealer.
	—	<ul style="list-style-type: none"> The menu is displayed in the operation display on the printer. →End the menu operation, and display the READY screen.
	—	<ul style="list-style-type: none"> The printer is not connected correctly. →Check the cable connections*, turn the camera and printer off and then on again, and then try again.
CHECK CONNECTION	—	<ul style="list-style-type: none"> The camera is not connected to the printer properly, or the printer is not turned on. →Check the cable connections*, turn the camera and printer off and then on again, and then try the operation again.
		<ul style="list-style-type: none"> The camera is connected to a USB device other than the printer for this system. →The camera cannot be connected to a USB device other than the printer for this system.
PAPER SIZE MISMATCH	—	<ul style="list-style-type: none"> The UPC-X34 series is inserted in the printer, but a print size available only for the UPC-X46 series or the UPC-X45 series was selected on the camera. →Replace the print pack in the printer with the UPC-X46 series or the UPC-X45 series. →On the layout preview screen, select a size that can be printed with the UPC-X34 series.
TRANSMISSION FAILED!	—	<ul style="list-style-type: none"> Print data failed to transmit. →Check the cable connections*, turn the camera and printer off and then on again, and then try the operation again.

After performing the actions described above, press the MENU/GO BACK button to clear the error message on the camera.

* Check the following three cable connections: inside the cap on the camera grip (page 10), between the printer connection cable and the USB cable, and between the USB cable and the connector on the rear of the printer.










Camera	Printer	Cause/Solution
SD cards cannot be used with this camera!	—	<ul style="list-style-type: none"> An SD memory card has been inserted. →Remove the SD memory card, because it cannot be used with this camera.
Change ModeDial? To change, press OK. Otherwise, restore ModeDial to previous position.	—	<ul style="list-style-type: none"> The mode dial setting was changed during printing. →To change the setting, press OK. →To keep the previous setting, return the mode dial to its previous position.

After performing the actions described above, the error message on the camera disappears automatically.







List of Icons

Camera













Main Unit

Icon	Description	Page (s)
	On/Standby	10
	Capture mode	11, 31, 34
	Playback mode	11, 31, 35
	Zoom	11, 21, 25
	Print (Playback mode or auto-review display)	11, 23
	Image Resolution (Capture mode)	11, 42
	Delete (Playback mode or auto-review display)	11, 21
	Flash Mode (Capture mode)	11, 39
	Select Frame	12, 21, 45




LCD

Icon	Description	Page (s)
	Power Indicator (Batteries: charge getting low)	65
	Power Indicator (Batteries: fully discharged)	65
	Power Indicator (AC power supply)	65
	Menu Lock	55
	Protected Picture	27
	Camera shake warning	21










MENU (Capture Mode)

Icon	Description	Page (s)
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

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